

The Design Patterns of Administrative Building: Precedent Studies and Designing Fenggang Administrative Center

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May 2014

Submitted towards the fulfillment of the requirements for the Doctor of Architecture Degree.

School of Architecture
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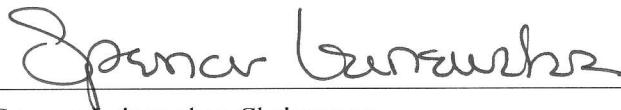
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We certify that we have read this Doctorate Project and that, in our opinion, it is satisfactory in scope and quality in fulfillment as a Doctorate Project for the degree of Doctor of Architecture in the School of Architecture, University of Hawai'i at Mānoa.

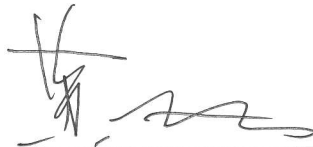
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Abstract

As the space closely related to a country's political system and its administration, administrative buildings reflect the interaction between country, society and citizens from ancient times. What is the relationship between ideologies and the design of administrative buildings? What are the design patterns of administrative buildings? How to design a good administrative building in today's China?

Based on the above questions, the thesis consists of two major parts. The first part focuses on Western administrative buildings: the historical evolution and the contemporary trends have been studied and analyzed. Through typology studies, the design patterns are summarized at three levels: macro level—three types of building location of administrative building in the city; meso level—four forms of square space; micro level—the architectural design influenced by three main factors. The second part of the thesis focuses on the implications in China. It starts with the current issues of administrative buildings in China, followed by the study of vernacular architecture and yamen buildings in Guizhou, and as the result, a scheme for Fenggang Administrative Center has been proposed to illustrate a new set of design strategies.

The research attributes great importance to the urban features of administrative buildings, and tries to establish an open frame for the design patterns of administrative buildings, not only for historical studies but also for future designs. By the research and the design, the thesis makes a statement that administrative buildings built with a more appropriate scale, more public presence and more cultural identities are needed for the emerging civil society.

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Chapter 1 | Introduction

1.1 Origin of Research

Administrative building is a special type of architecture since ancient times: in the long historical process of development, administrative building developed simultaneously with country and city. Its development process is closely related with the country's political system and social relations; Its design is related not only to the city's economy, culture and other aspects, and more importantly, it is closely related to the political ideology. Thus administrative buildings show significant difference.

The concern for administrative building comes from two aspects: first is my interest in sociology and history which are associated with architecture. And administrative building is a building type with its own unique design patterns since ancient times. It also provides valuable information for study of political ideology, city and culture. On the other hand, during my postgraduate stage, I had the chance to participate in the actual project — Fenggang Administrative Center in Guizhou, China under the guidance of Professor Yiru Huang, and I began to reflect on the design patterns of administrative buildings. With the support of Tongji University and University of Hawaii at Manoa's dual degree program, I had the opportunity to do field trips to study Western administrative buildings outside of China. Through nearly a month of field research in Europe and travel in USA, I got some experience and understanding of Western administrative buildings, and collected a certain number of first-hand information. The research aims to classify and summarize the design patterns of Western administrative buildings to provide a reference for the design of administrative buildings. Based on the studies focusing on China, especially Guizhou Province, the scheme for Fenggang Administrative Center will be proposed as the final design/research outcome.

1.2 Research Questions and Purposes

What is the relationship between ideologies and the design of administrative buildings?
What are the design patterns of administrative buildings? How to design a good administrative buildings in today's China?

The research tries to study architectural phenomenons in different historical periods and different political ideologies, and analyze design features of administrative buildings. Through the analysis and induction of typical examples, the historical evolution and the contemporary design trends are discussed, the design patterns at different levels are generalized. Specific vernacular architecture and site are studied according to the context of the project. The research and the design together are hoped to be reference for future architecture studies and designing administrative buildings particularly in China,

1.3 Research Subjects

1.3.1 Administrative Building

In Chinese, the term “xingzheng 行政” (administration) comes from the book *Zuozhuan 左传*: “xing qi zheng shi 行其政事” (runs the political affairs) and “xing qi zheng li 行其政令” (execute the government decrees). In China, the term “yamen” has been widely used for centuries, which is any local bureaucrat's, or mandarin's, office and residence of the Chinese Empire. In Western countries, administrative buildings generally include city hall, town hall and legislature building (usually called “parliament” in Europe and “capitol” in United States). In *The American Heritage Dictionary of the English Language*, “administration” is explained as “the activity of a sovereign state in the exercise of its powers or duties”. Based on the understanding of “administration”, “administrative building” can be defined as: building for those who constitute the executive branch of a government.

1.3.2 Design Pattern

“Design pattern” in architecture is a formal way of documenting a solution to a design problem in a particular field of expertise. The idea was introduced by the architect Christopher Alexander in his book *A Pattern Language* “The elements of this language are entities called patterns. Each pattern describes a problem that occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice.” It should be noted that design pattern is not specific design method, but the methodology to solve common problems. Design pattern is instructive to design direction under certain circumstances—especially for the design problems at different levels, designers can choose different design patterns according to the actual situation at corresponding level. The design patterns investigated in the research refer to administrative buildings and exterior spaces of different historical periods in the range of Western countries. It includes city halls, town halls, legislature buildings and square spaces.

1.3.3 Fenggang Administrative Center

Located east of Zunyi city, Fenggang County proposed an development plan of new town construction. In the proposed new town with an area of 5.28 square kilometers, the municipal government decided to build an administrative center as the startup project. In July 2012, Tongji Architectural Design Institute was designated to design the regulator detailed plan and the administrative center project. The author was one of team members of this project. In the second part of the thesis, the early schemes by Tongji Architectural Design Institute will be examined, and a new scheme will be proposed as an improvement of conventional design approaches. Other studies of historical buildings and vernacular architecture related to the design project are also included.

1.4 Research Methodology

First, the research is based on the literature review and field trips of historical and contemporary Western administrative buildings. Using history and sociology as a guide, with analysis of building examples, the design patterns of Western administrative building are systematically reviewed and summarized. Second, the final design outcome is supported by the study of current design issues and the historical research of vernacular architecture and historical buildings. Three primary research methods are used in the research:

(1) Case study research: focus on collecting and collating the background information of research objects, including historical background, building appearance, building layout, spatial and functional status, etc.

(2) Qualitative research: considering the complexity of design patterns at different levels, the research mainly adopt qualitative research methods, such as figure-ground diagram, analytic diagram, image analysis, etc. to define the architectural phenomena and features at each level.

(3) Comparative synthesis: through qualitative analysis and synthesis, administrative buildings of different periods in Western history are taken into longitudinal comparison and crosswise comparison, and design patterns at three levels are summarized. Besides, the current design issues are concluded as the main foundation of the design concepts, and lessons from traditional architecture serve as reference for the design.

1.5 Document Outline

The document outline is divided into eight chapters. Besides this chapter, the main content of the thesis includes six parts:

Chapter 2: The characteristics of administrative building in different stages of Western

history are generalized. Historical evolution of Western administrative building is described in general, ideologies behind architectural phenomena are analyzed, and the corresponding relationship among them is examined from historical and sociological perspective.

Chapter 3: This chapter analyzes the political foundations and theoretical background of contemporary Western administrative buildings and summarizes its trends. The forecast of the future trends and its practical guiding significance for design are put forward.

Chapter 4: Through interpretation of examples, the design concepts and design methods at different levels are analyzed. By the induction of similar architectural phenomena, design patterns of Western administrative building are summarized at three levels—macro level, meso level and micro level.

Chapter 5: The role of administrative buildings in urban space of feudal China and today's China is discussed. Based on the analysis of contemporary administrative buildings in China, three design issues have been brought up: scale, public presence and identity.

Chapter 6: The larger context of the project is introduced, including natural conditions, historical, social and cultural issues. Traditional architecture including vernacular architecture of both ethnic minorities and Han Chinese, and yamen buildings are studied.

Chapter 7: This chapter introduces the physical site and the project, uses drawings with explanation to illustrate a new set of design strategies applied in the design of Fenggang Administrative Center.

In addition to the main content, Chapter 8 is research conclusions. The main research findings and contributions are summarized, the direction of future research is defined, and the research implications are proposed.

Chapter 2 | Historical Evolution of Western Administrative Building

The evolution of human civilization is “an ever-upward spiral to truth”¹. In its development process, Western society has also gone through different stages—from clan system to slavery, from slavery to feudalism and finally evolved to bourgeois democracy. Slavery Ancient Greece and Ancient Rome laid the foundation of Western civilization. More than 2500 years ago, people began to practice the principle of democracy in rallies. Spaces where democratic debate occurred are human’s natural expression of democratic ideals. Ancient Greece achieved the transition from clan system to slavery. The state namely was the whole society—private life and political life were combined together; In Roman times, monarchial power was the supremacy. and state and society are highly uniformed. From the Middle Ages until the eve of the bourgeois revolution, Western countries were feudal society and had completed the preparation of the bourgeois revolution; In the late Middle Ages, the awakening of citizen class led the internal autonomy of cities. After the bourgeois revolution, state and society, as well as politics and religion, got separated. The study of civil society and public domain arose, and modern Western society had slowly taken shape. Being the architecture which has the close relationship with political system and administration managements, the administrative building has been reflecting the interaction relationships among the state, the society and the citizens from it appeared. During long social changes, Western administrative buildings were also changing step by step. I generally divide its historical evolution into three stages: the original stage in Ancient Greece and Ancient Rome, the developing stage in the Middle Ages and Renaissance, the mature stage after the bourgeois revolution.

2.1 From Ancient Greece to Ancient Rome

¹ Nigel Warburton, *A Little History of Philosophy* (New Haven: Yale University Press, 2011), 126.

2.1.1 Ancient Greece

“Ancient Greece is the birthplace of Western culture, and Western political system is also derived from the ancient Greece tradition.”² Greek written history begins from Homer. Although Homer’s epic poems are mythical, it reflects many real historical situation during the transition of ancient Greece from clan system to slavery. During the so-called Greek Heroic Age, a public authority system was formed and council of citizens (boule) emerged. The people’s assembly (Ecclesia) and military leader have different duties. With the emergence of state, this kind of council was changed into Senate. During this period of earlier, except a number of representative palace building (Knossos, Malia, Kato Zakros and Phaistos in the Minoan civilization), the prototype of Western city hall and political square (Agora) also emerged in ancient Greece: the council within city hall is the evolved form of the Senate, which probably is the oldest political institution, and the formal square may be the open space where senators gathered.³ (Figure 1)



Figure 1 The Pnyx in Athens, one of the earliest political meeting places
Deyan Sudjic and Helen Jones, *Architecture and Democracy*
(London: Laurence King Publishing, 2001), 6.

By the 8th century BC, Greeks had established many city-states (polis) on islands in the Aegean Sea, the Black Sea and the Mediterranean Sea. Among these city-states, the most famous is classical Athens. After reforms of Theseus, Solon, Cleisthenes and Pericles, Greek liberal democratic political system was gradually built up. From the earliest Senate to the 500

² Xiaoyuan Ma 马啸原, *Xifang Zhengzhi Zhidushi 西方政治制度史* (Beijing 北京: Higher Education Press 高等教育出版社, 2000), 1.

³ Lewis Mumford, translated by Junling Song and Wenyan Ni, *The City in History* (Beijing: Zhongguo jianzhu gong ye chu ban she, 2005), 102.

people's assembly (Ecclesia), the democratic characteristic of Athens administration gradually formed: aristocracy gradually disappeared, and civilian stratum had been given more and more power. With the popularity of the Greek democratic ideas and the advancement of civilian status, the market where civilian market activity happened gradually became the center of the city. As well as the market activity function, the political activities function of the market was increasingly strengthened, and as a symbol of democratic ideas, the market had become the center of the city. Greek city square (Agora) was evolved from these early markets. During the transition from market to square, the loggia and other public buildings around market started to emerge: besides public buildings like shops, churches and baths, Senate, bouleuterion and other government administrative buildings were built (Figure 2). The bouleuterion, mostly a rectangular hall, was often located in the city center. Free-born male land-owners who were citizens would gather in the agora which was connected to the bouleuterion. The city's political activities were held in the bouleuterion and agora, and public affairs were decided by citizen representatives of citizen after discussion, then the legal provisions were be inscribed on the wall of the loggia beside agora. In the early agora, various buildings are independent, later with the increased importance of the loggia, agora and the surrounding buildings had a tendency to be gradually unified: the independence of various buildings was undermined, and the bouleuterion has been unified into building complex. The later agora generally had a loggia with a expanded scale, a consistent partition and a complete image. For example the agora in Assos, it is trapezoid-shaped with unparallel colonnade on both sides (Figure 3).

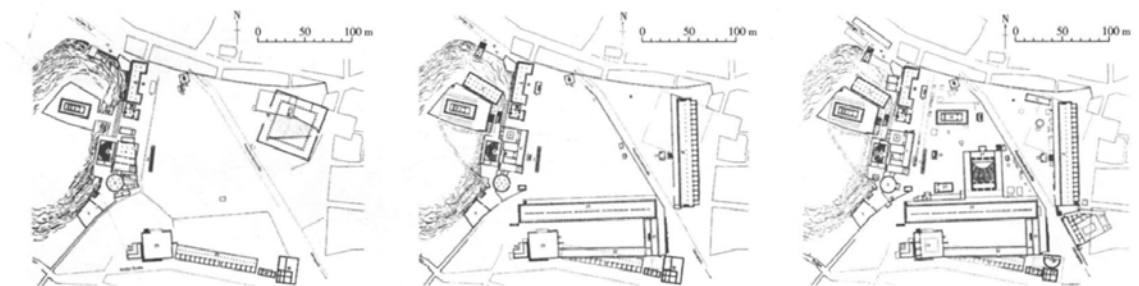


Figure 2 Ancient agora of Athens in three different periods
 (from left to right: 3rd century BC, late ancient Greece, ancient Rome)
 Yongjie Cai, *Cheng shi guang chang* (Nanjing: Dongnan da xue chu ban she, 2006), 11.

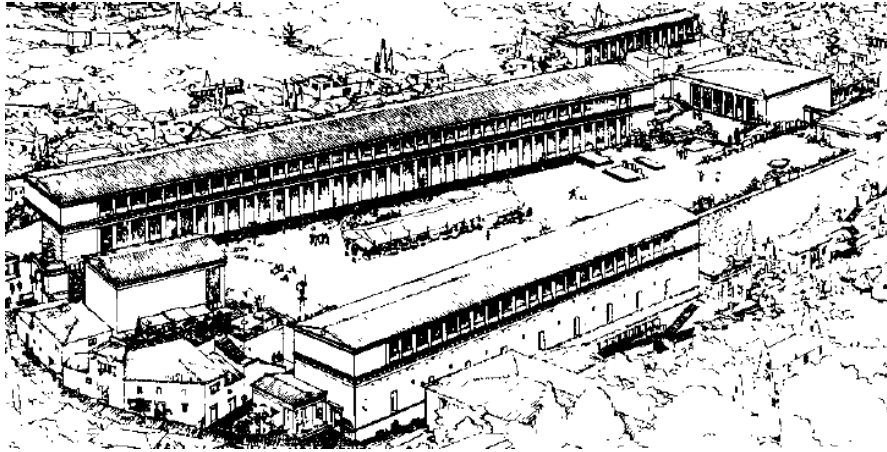


Figure 3 The agora and the bouleuterion in Assos
 Zhihua Chen, *A History of World Architecture*
 (Beijing: Zhongguo jian zhu gong ye chu ban she, 2010), 49.

In ancient Greece, the private life and the political life were combined closely. The administrative building reflected an early democratic and open characteristic of civilian politics. The bouleuterion and other administrative buildings were mostly built on a human scale with a random layout, which created a strong democratic atmosphere and established the basic form of Western administrative buildings and spaces.

2.1.2 Ancient Rome

The development of ancient Rome political system can be divided into two stages: Roman Republic and Roman Empire. Ancient Rome also started from the clan system, and public affairs were run by the senate. Gradually, like the early ancient Greece, the aristocracy began to emerge. After a constant struggle between civilians and the aristocracy, the political system of the Roman Republic was finally formed in the 3rd century BC. The ancient Rome in this period was no longer dominated by the aristocracy, the central state organs of the Roman Republic consisted of the senate, the legislative assemblies and executive magistrates (including consul, aedile, praetor, tribune, quaestor, censor, etc.).⁴ (Figure 4) The administrative buildings

⁴ Xiaoyuan Ma 马啸原, *Xifang Zhengzhi Zhidushi 西方政治制度史* (Beijing 北京: Higher Education Press 高等教育出版社, 2000), 31.

and spaces of Roman Republic, which can be seen as the inheritance and continuity of ancient Greece, was similar to the one of late ancient Greece. Administrative buildings built around the square, coupled with the surrounding temples, markets and other public buildings, together constituted the Forum of Roman Republic, which had the administrative, religious, public gathering, trade and other functions. There was no unified planning for building complex, as same as ancient Greece, most forums were open and approachable, and each building was independent with its own appearance. Such as the forum in Pompeii, its plan was a slim rectangle and different types of building were built around it. Colonnade on three sides of the forum formed a shape of integrity, and the Comitium was situated in the south of the forum. Also the Roman Forum at the center of the city of Rome, which was also gradually built during Roman Republic, was surrounded by several important government buildings including the Senate House. Its composition and layout vividly reflected the characteristics of the Roman republican system.⁵

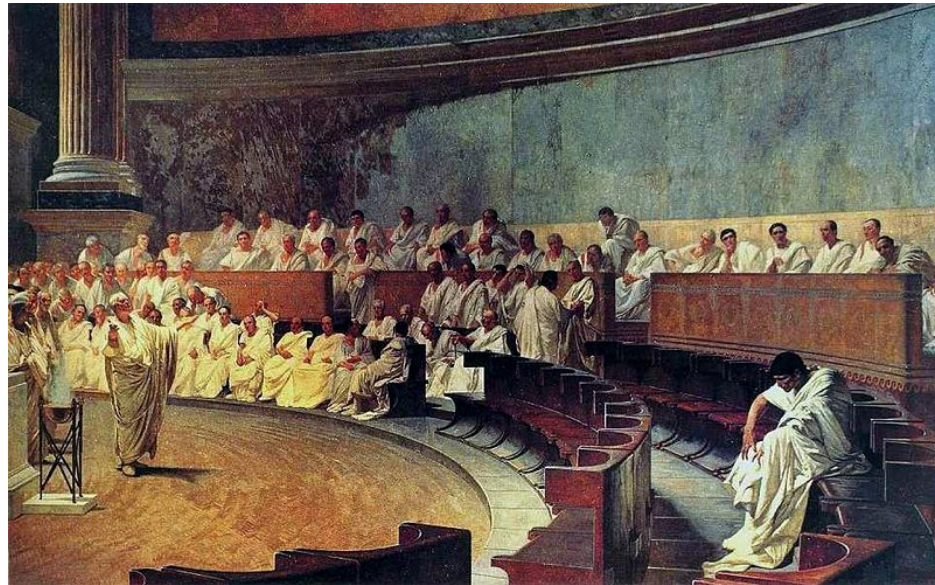


Figure 4 Representation of a sitting of the Roman Senate by Cicero attacks Catilina, 19th-century fresco.
Source: <http://en.wikipedia.org/wiki/File:Maccari-Cicero.jpg>

⁵ Zhihua Chen 陈志华, *A History of World Architecture 外国建筑史* (Beijing 北京: China Architecture & Building Press 中国建筑工业出版社, 2010), 71.

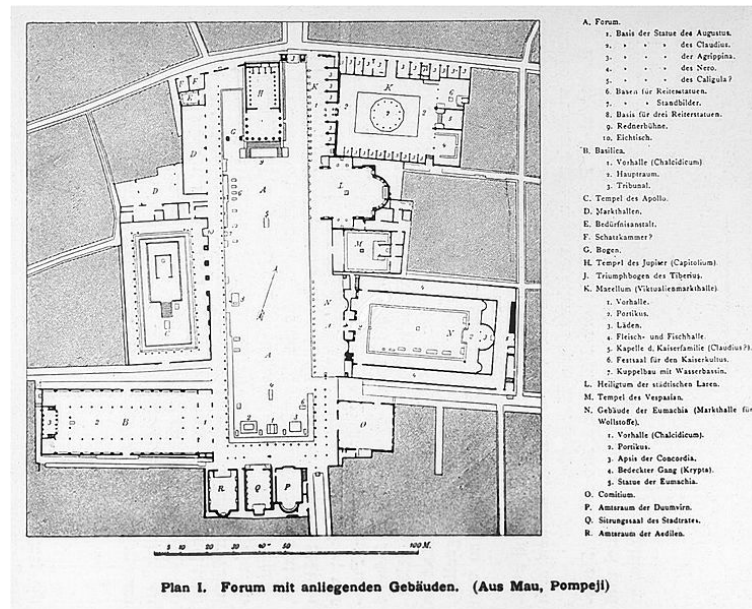


Figure 5 The main forum in Pompeii.

Source: http://en.wikipedia.org/wiki/File:Plan_von_Pompeji-Mau.jpg

However, in the late Republic, there was the conflict of the orders between the aristocracy and the ordinary citizens. Massive slave revolts, the contradiction between citizens, proletarians and governors, together with the revolt and insurrection in the conquered regions, forced Rome into relying on the strong military force to maintain its rule for a long time. Then Rome entered the Roman Empire. In the Roman Empire, the power of emperor was extended unlimitedly. The imperial bureaucracy was built, and the emperor's council (consilium) was set up with dominant judicial powers. The state authority was no longer the town councils elected by citizens, however the emperor was the ultimate authority. Thereafter, administrative buildings and spaces had been transformed from bouleuterion and agora or square in ancient Greece and the Roman Republic into emperor's palace and honorific memorial forum. Praising power and recognizing merits and achievements was their main intention (Figure 5). Therefore the scale and the form of building and square had been greatly changed—former open space was changed to closed and heavy, and the random layout was changed to symmetrical. These forums vividly demonstrate the relationship between architectural form and political situation, and the change

process from the Republic to the Empire and the imperial cult.⁶ For example, the layout of the Roman Forum was nearly symmetrical, and the main buildings were temples which were built for symbolizing and praising emperors. During the Empire period, forums became increasingly closed and heavy, however the strict axis, the manipulated space and the large scale invariably embodied the Empire and emperor's authority. Such as the Forum of Augustus and the Forum of Trajan, both as part of the Imperial forums (Figure 6, 7, 8). The Forum of Augustus was built by Augustus, who was the heir to Caesar, after he established the Roman Empire and became the first Emperor. The Forum of Augustus was built to both house a temple honoring Mars, and to provide another space for legal proceedings, as the Roman Forum was very crowded.⁷ Correspondingly, the high walls enclosing the square completely isolated the surrounding city. The Forum of Trajan interpreted the emperor worship to the extreme: "Within the depth of nearly 300 meters, rows of building were laid out. Indoor space alternates with outdoor space; The space alternates between vertical and horizontal, big and small, open and closed; Statuary alternates buildings. This series of alternating was used consciously to create the architectural climax, which also was the climax of the emperor worship."⁸

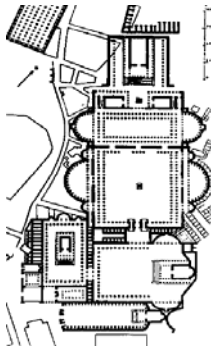


Figure 6 Roman Forum

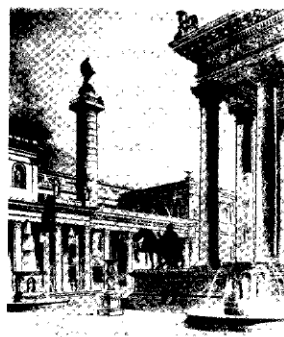


Figure 7 Forum of Augustus

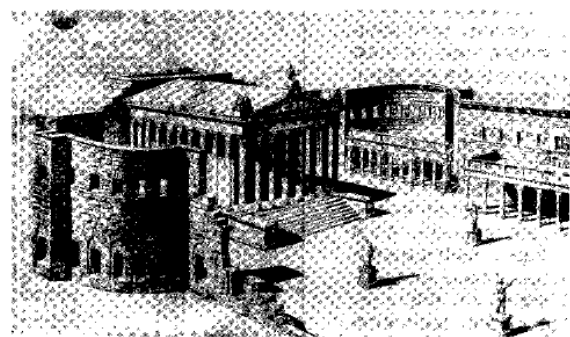


Figure 8 Trajan's Forum

Zhihua Chen, *A History of World Architecture*
(Beijing: Zhongguo jian zhu gong ye chu ban she, 2010), 59-61.

Through the evolution of forum in Ancient Rome, the transition from the republic to the empire and the process of imperial power strengthened to the imperial cult are reflected. In this

⁶ Zhihua Chen, *A History of World Architecture* (Beijing: Zhongguo jian zhu gong ye chu ban she, 2010), 59.

⁷ Donald C Earl. *The Age of Augustus* (New York: Crown Publishers, 1968), 116.

⁸ Zhihua Chen, *A History of World Architecture* (Beijing: Zhongguo jian zhu gong ye chu ban she, 2010), 61.

process, multi-level layout symmetrical along axis was developed, and the artistic qualities and the power of this form of layout had been recognized. Simultaneously, the composition skill of unified build and outdoor space was mastered and used to consolidate the empire and to serve the imperial cult. Space order, axial relationship, monument, exedrae, etc. became prototypes of later European executive squares.

2.2 From Middle Ages, Renaissance to Absolute Monarchy

2.2.1 Middle Ages

In European history, the Middle Ages, or Medieval period, lasted from the 5th to the 15th century. It began with the collapse of the Western Roman Empire and merged into the Renaissance and the Age of Discovery. After the collapse of the Roman Empire, overlords established independent regimes in fiefs. Except the Byzantine Empire in the east in the Early Middle Ages, there was no centralized regime. As secular regimes were disunited, religion played a significant role in the management of social system. Politics and religion became more and more integrated, and politics transferred from secular government to religious power.⁹ In the period of agricultural domination (before the 10th century), church's role in social management was very obvious, and cathedrals were also increasingly prominent and became the most important symbol of the city center. However, after the 10th century, the High Middle Ages saw an expansion of population. Cities' economy gradually recovered, public class grew up, and there was a gradual awakening of mentality of the townspeople. The townspeople composed by craftsmen and merchants finally achieved the internal autonomy of the town. With the autonomy of town achieved, politics and religion also began to separate. The town's administrative function gradually became complete and independent, and town hall also appeared as a new building type. Being the location of the town authority and the place of democratic life, medieval town halls were not only the center of the municipality administrative activities, but also bore a certain

⁹ Deyan Sudjic and Helen Jones, *Architecture and Democracy* (London: Laurence King Publishing, 2001), 6.

amount of functions for daily living. Town halls were often closely related to other secular buildings, sometimes were also used as market halls, and were often integrated with markets (ground floor as commercial space). The importance of cities' economy was reflected. Town hall buildings and the plaza in front of it were more and more tightly integrated., which gradually became an integral part of the city center and the most active public place. Town halls usually had a tall tower, sometimes the height of tower even exceeded the height of the church steeple; There were rich and lively architectural forms, and the details and materials of city halls were more similar with ordinary buildings. Such as Brussels Town Hall and Bruges Town Hall, both in Belgium, are outstanding representatives of administrative buildings (Figure 9). The latter has a large 85m tall tower as the city's vertical axis, which signified the importance of administrative building over the church.¹⁰ As city hall squares of the Middle Ages were the results of long-term natural urban development, city halls were often in a subordinate position when being adjacent to the city church, and symmetry was not necessary. Administrative activities were often associated together with the general public cultural activities, lively rather than authoritative. For example the Piazza San Marco (St Mark's Square), its construction had gone through several centuries, and the image of the square is integrally formed by the surrounding St Mark's Basilica, city hall, library, cafes, etc. The square space is varied, the image is integrated, and different buildings are well-proportioned. Another famous city hall plaza of this time is the Piazza della Signoria in Florence, Italy, it is also a typical square combining administrative functions and cultural functions. (Figure 10) The soaring tower of the town hall building (Palazzo Vecchio) located in the square became a symbol of Florence, and the Loggia dei Lanzi, in front of the town hall by the south-side, consists of wide arches open to the street (Figure 11). The wide arches appealed so much to the Florentines, as it is effectively an open-air sculpture gallery of antique and Renaissance art. And the Uffizi Gallery was built by the south side of the town hall. Administrative activities and cultural activities were combined together, making it the world-famous administrative and cultural square.

¹⁰ Zbaoye Guan, "Shi zheng ting he shi zheng guang chang", *World Architecture* 3 (1994): 70-72.

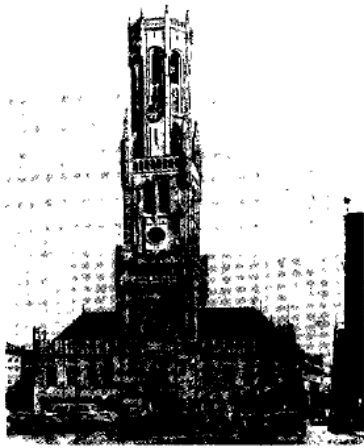


Figure 9 Bruges Town Hall



Figure 10 Piazza della Signoria



Figure 11 Loggia dei Lanzi

Zhihua Chen, *A History of World Architecture*

Photo taken by Tao Yang

(Beijing: Zhongguo jian zhu gong ye chu ban she, 2010), 59.

2.2.2 Renaissance

The Renaissance spanned the period roughly from the 14th to the 17th century, beginning in Italy. It is regarded as “Renaissance” cultural movement because, using the revival of classical culture as the important method, it is an anti-feudal and anti-religious theology humanist movement in the field of ideology and culture. Although formally it was the revival of classical culture, it was not just simple imitation: human centralization, respect for humanity, human dignity and liberty—these theories are the theoretical basis of modern Western political thought, the starting point and the destination of various political doctrines.¹¹ In politics, the Renaissance was raised by the emerging bourgeoisie to maintain and develop their economic and political interests, and to against the church’s rule. As long as the capitalist relations was generated, it greatly developed the fierce struggle between citizens and feudalism in the religious, political, ideological and cultural fields since the Late Middle Ages. Capitalism’s struggle against religious rule prompted the construction of more public buildings. Many new types of public buildings emerged, among which town halls and other administrative buildings had been developed greatly: architectural forms became more lively, and color was also more abundant. As

¹¹ Xiaoyuan Ma, *Xi fang zheng zhi si xiang shi gang* (Beijing: Gao deng jiao yu chu ban she, 2008), 226.

city hall and plaza were together and connected more closely with ordinary people's lives, town hall squares had become civic square in the city. The Piazza del Campidoglio, which designed by Renaissance artist and architect Michelangelo Buonarroti, is a very famous example (Figure 12). The Piazza del Campidoglio was built on the basis of the original old senate building and the Tabularium. The new museum was built on the opposite of the original archives. Michelangelo designed a new façade for the dilapidated Palazzo dei Conservatori and he designed the Palazzo Nuovo to be a mirror compliment, thereby providing balance and coherence to the ragged ensemble of existing structures.¹² The symmetrical pattern placed the Palazzo Senatorio (Senatorial Palace) in a very middle position, and axiality and symmetry govern all parts of the Campidoglio. The Senatorial Palace, which is 27 meters high, is highlighted by the buildings on both sides which are 20 meters high. Its double ramp of stairs was designed by Michelangelo. The staircase cannot be seen solely in terms of the building to which it belongs but must be set in the context of the piazza as a whole.¹³ The steps, beginning at the center of each wing, move gently upward until they reach the inner corner, level off and recede to the main surface of the façade. This interruption of the diagonal line and the brief inward change of direction both absorbs the central axis and links the two sides. For any emerging city of the Renaissance, administrative space, as the seat of government, was undoubtedly one of the core elements constituting the city, and shouldering the city's symbolic meaning at the same time. Because of the enhanced status, administrative buildings had been greatly developed compared to the Middle Ages. The architectural image was increasingly prominent, and there were more and more emphasis on the integrity of buildings in the design of the square in front of administrative building.

¹² William Wallace, *Michelangelo: The Artist, the Man, and His Times* (Cambridge: Cambridge University Press, 2010), 229–231.

¹³ Herbert Von Einem, *Michelangelo* (London: Methuen and Co. Ltd., 1973), 197–206.



Figure 12 Piazza del Campidoglio
Photo taken by Tao Yang

2.2.3 Absolute Monarchy

In 17th century, represented by France, Europe had entered a period of absolute monarchy. With its increasing power France became the most powerful centralized kingdom in Europe in 17th century. During the reign of King Louis XIV, in order to consolidate the monarchy and to show off monarchical power, palace building serving the monarch appeared. Organized and orderly classical culture, which can symbolizes centralization, was advocate in the palace. In the design of city's administrative spaces such as palace complex, geometric aesthetics had been greatly promoted. The social background was that the dominant monarchical government had a demand of reflecting an orderly, organized and eternal regalism in all areas of social life. Back in the late Renaissance, the Baroque style which was closely integrated with power had emerged. Baroque planning was different with the free and irregular medieval planning. It applied straight streets and regular blocks, and rectangular or circular squares radiating many streets and avenues—these were the main features of Barque planning.¹⁴ After the 17th century, such characteristic of Baroque gave birth to the rationalism and classicism

¹⁴ Lewis Mumford, translated by Junling Song and Wenyan Ni, *The City in History* (Beijing: Zhongguo jianzhu gong ye chu ban she, 2005), 290.

serving monarchical power, on which René Descartes had great influence. Descartes was one of the most representative philosophers of the 17th century of the Western, and also a mathematician and writer. He believed that everything in our society shall be placed in the geometric coordinate system established by the same origin, thus the order generated by it is eternal and perfect. Influenced by rationalism, not only administrative spaces, other urban spaces all reflected a purely geometric structure and principles of mathematics. Axis and hierarchy were emphasized, abstract symmetry and coordination were pursued.¹⁵

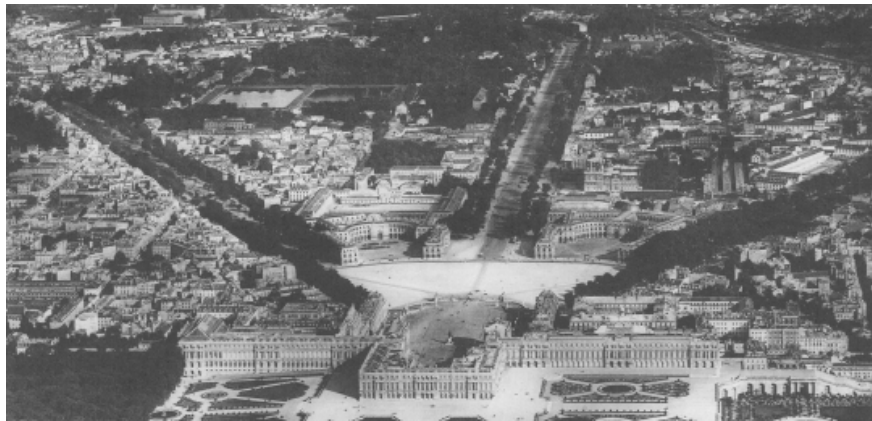


Figure 13 The Palace of Versailles

Spiro Kostof, *The city shaped : urban patterns and meanings through history*
(Boston: Little, Brown, 1991), 237.

The Palace of Versailles (Figure 13), 23 kilometers southwest of the French capital Paris, is a representative of administrative buildings of this period. Louis XIV built the new palace in Versailles which was a country village in the suburbs of Paris, and moved all functions of the government agencies and all the court into one large building in order to facilitate his supervision. So the Palace of Versailles was not only the monarch's place but also the administrative center of the kingdom. Its simple composition, strong axial relationship and strong primary-secondary relationship all became the conspicuous symbol of monarchical power. Evolving with the palace, the geometric gardens of Versailles was built. Strong axis and symmetrical layout lost the vigor and vitality of medieval and Renaissance Squares. But its grand momentum has been admired and emulated over periods of time and even today.

¹⁵ Liangping Hong, *Cheng shi she ji li cheng* (Beijing: Jian zhu gong ye chu ban she, 2002), 63.

2.3 Formation of Western Capitalist Societies

Since the 17th century English Civil War (1640), European feudal systems began to collapse, and capitalism began to win in the advanced countries. Along with the three revolutions occurred in England, France and America, the political system of capitalist countries was established. In the following hundreds of years, Western political ideas became more and more mature. Starting from the Age of Enlightenment, studies on the concept of state, society, citizen and their interrelation have been gradually systemized. The main theories include: *The Social Contract*, natural and legal rights, political freedom, social equality, the separation of powers, the democratic political theory, etc.¹⁶ Regarding the studies on the relations between state, society and citizen, there are also theories like “public sphere”¹⁷ and “civil society”¹⁸. Western political thought had become increasingly diverse, and at the same time, administrative buildings in this period also entered a relatively mature stage showing a diverse situation. Shortly after the victory of the bourgeois revolution, retro tendencies showed in both Western urban planning and architectural design from eighteenth century to the end of the nineteenth century, and administrative building was a prominent representative. It was mainly because of the political needs of emerging bourgeoisie who attempted to seek ideological resonance from ancient architectural heritage. After the revolution, the capitalist class urgently needed to establish the authority through its administrative buildings and spaces, and there was no better way to reflect authority than the style based on Baroque which was established in the absolute monarchy period. Thus military, government, capitalist enterprises inherited the unique spirit and form of Baroque. Especially in the planning and design of government buildings, baroque had been the dominant image: while new town halls were often built according to the medieval mode in the 19th century Europe, however, parliament and government buildings were constructed according to the Baroque style. Administrative building of this period was an expression of the concept of

¹⁶ Xiaoyuan Ma, *Xi fang zheng zhi si xiang shi gang* (Beijing: Gao deng jiao yu chu ban she, 2008), 226.

¹⁷ Jürgen Habermas, translated by Weidong Cao, *Strukturwandel der Öffentlichkeit* (Shanghai: Xue lin chu ban she, 1999)

¹⁸ Zhenglai Deng, *State and Civil Society* (Beijing: Zhong yang bian yi chu ban she, 1999)

sanctified political power. To highlight its symbolism of the public's rights, the volume of administrative building began to increase; classical techniques such as colonnade and symmetrical layout were used to strengthen the solemn sense of the building; squares in front of administrative buildings were the extreme interpretation of strong axis, symmetrical layout. The most typical example is Washington, D.C., the capital of the United States (Figure 14, 15). After the American War of Independence, since there was no historical accumulation, independence and freedom were expressed by borrowing ancient Greek and ancient Roman traditions. In order to reflect the separation of powers of legislature, executive and judiciary, the planner Pierre Charles L'Enfant located the Capitol, the Supreme Court Building and the White House in three prominent locations along the axis—Pennsylvania Avenue. A lot of consistent administrative office complexes were arranged in the vicinity. We can say that Washington, D. C. has all the characteristics of the absolute monarchy period: distribution of public and administrative buildings, wide street, axial arrangement, grand scale, massive green space. This retro approach was still popular until the 20th century. A large number of administrative buildings manifest the government's authority still by classical forms.



Figure 14 Washington, D.C.
Spiro Kostof, *The city shaped*
(Boston: Little, Brown, 1991), 208.

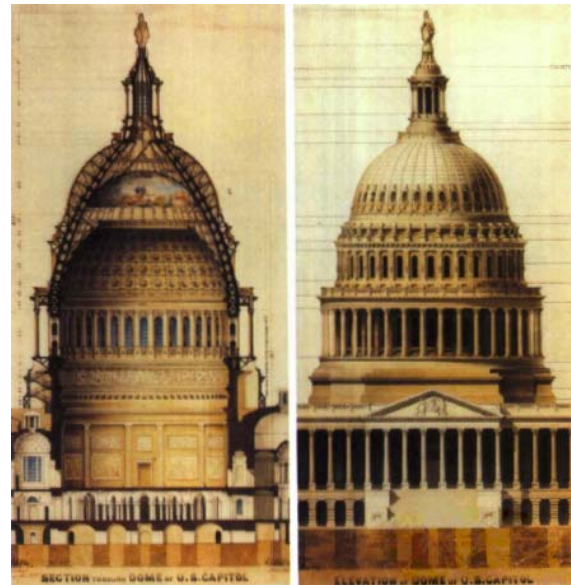


Figure 15 United States Capitol
Deyan Sudjic and Helen Jones, *Architecture and Democracy*
(London: Laurence King Publishing, 2001), 33.

After World War II, with the development of industrial technologies and natural sciences, Western countries have entered a relatively free market economy system, the urban life of Western societies has become more diverse. Public perception of government has changed. People's concern about the reality coexists with the vision for the country's democratic future. The relationship between people and government becomes more closely related. The architecture field entered a new stage, and various architectural trends have emerged which play a significant role in promoting the development of modern cities and architectures. Under the influence of these factors, the design of administrative building has become increasingly diverse and has got rid of the previous mode of single space and single form. As the entity of government agencies, administrative building is perceived by the public and has become the symbol of the overall outlook of the city, and even of the State. Its dominant position in image is further strengthened; On the other hand, administrative buildings are more closely combined with urban spaces and the surrounding environment, and square spaces are used for public activities. The trends of contemporary Western administrative building will be discussed in particular in the following chapter.

2.4 Summary

The evolution of Western administrative building has gone through three stages: the original stage, the developing stage and the mature stage. Simultaneously, Western society has gone through the process from slavery to feudalism and then capitalist society. The classical administrative building originated from agora, and it had close and simultaneous relationship with agora, forum, market, plaza and square. There were different types and features of administrative buildings of different historical periods, which were closely related to the powers and duties of governments. Overall, the development of Western administrative building was closely related to squares. Under the influence of political power, it alternately showed open, public characteristics of citizens and closed private characteristics of dictatorship. (Table 2.1)

Table 2.1 Morphology and design feature of Western administrative buildings

Time	Stage of Development	Building Morphology and Design Feature
Ancient Times	open space	settlement center
Ancient Greece	organization of democratic regimes: Ecclesia as the highest organ of state power	Agora, Bouleuterion: often combined with market, relatively small size, mixed functions, moderately open square
Roman Empire	organization showing the imperial power	Forum, Senate House, Royal Residence, Temple: began to emphasize axis order, grand scale building size, relatively closed square form
Middle Ages	function of the organization changed into serving taxpayers	Town Hall: often enclose market square together with church, gothic style, varied square space, random layout
Renaissance	non-isolated design, focusing on the integrity with urban space	Municipal Square, City Hall: emphasizing architectural form, symmetry and unity, open square space with multi spatial levels
Absolute Monarchy	symbol of imperial authority, similar to the Roman Empire	Palace: neoclassical, emphasizing the magnificence of square and building
Early Capitalism	functional urban order and classical architecture form	Capitol, City Hall, Capital: reflecting the capitalist political system (separation of powers) and democratic ideals

Edited by Tao Yang

Chapter 3 | Trends of Contemporary Administrative Building

In the 20th century, a variety of architectural philosophies and styles mushroomed, especially modernist architecture, promoting the development of administrative building. More administrative buildings have been built in the 20th century than any previous century. How to integrate modernist ideas and state's will together and reflect them in the architecture design, has been a challenge faced by contemporary architects. Since the 20th century, in the design of new administrative buildings, many famous architects have tried to express the general philosophy of modernist movement as well as democratic ideals and national will. In this chapter, with various examples, the trends of contemporary Western administrative buildings are analyzed and summarized through

3.1 Political Foundation

Since the industrial society, most Western countries implement the political system of separation of powers, establishing modern governments. The separation of powers is a model for the governance of a state (or who controls the state). The normal division of branches is into a legislature, an executive, and a judiciary. Reflected in the physical spatial morphology of administrative building, three branches are placed in different buildings but connected together by a certain relationship, reflecting the separation of powers, checks and balances, but the consistency with national interests. Municipal system, which is the organization of city government, is the extension of political structure of state in the city. As part of the superstructure, municipal system has diverse forms: city commission government, city council government, mayor–council government, council–manager government, etc. (Table 3.1)

Table 3.1 Comparison of Western municipal system

Name	Characteristics	Representative County and City
City council government	City council exercises both legislative power and executive power, the city council is the city government	United Kingdom
Mayor–council government (Weak-mayor form)	Legislative and executive branches are divided, city council is in a dominant position in the relationship with mayor	United States some small cities and few large cities
Mayor–council government (Strong-mayor form)	Legislative and executive branches are divided, mayor is in a dominant position	France, United States most large cities
City commission government	City commission is the city council and the municipal government, exercising legislative power and executive power	United States most medium-sized cities and few large cities
Council–manager government	City council appoints a city manager with executive power, city manager implement professional management of the municipality and the city	United States some medium-sized cities and some small cities

Edited by Tao Yang

The physical space of administrative building shows features which are adapted to Western municipal system. Administrative buildings include city hall and the parliament arranged in or around city hall, different braches are divided in space, and combined into a whole through a series of spatial association. As a legitimate meeting place, parliament building occupies a central position in the process of democratic decision-making, and also the dominant position of space. When compared with China, due to the high maturity of autonomy of local communities, developed markets and other reasons, Western countries have relatively small

number of administrative agencies and departments, the administrative function of the building is relatively simple, and not large in scale.

3.2 Theoretical Background

3.2.1 Revival of Civil Society

In the process of industrialization and urbanization, civil society began to appear, which is the process of the separation of the public sphere and the private sphere. Civil society and state has become two independent but interactional entities. Civil society expresses opinions through the public media, and exchanges opinions in the public space, participating national activities and influencing formation of policy through social activities. The complex bureaucratic rule of modern Western countries results in the suppression of civil society, especially after the emergence of the model of government intervention based on Keynesian economics since the mid-20th century, states infiltrate civil society in different forms and different dimensions. People began to resort to civil society theory again, attempting to make review, critique and adjustment to the extremely tense relations between the state and society, in order to reconstruct the positive interaction between state and society by remodeling and defending civil society. The revival of civil brought mankind into the age of post-statism age. In this age, non-governmental organizations undertake an important function of social governance, replacing the previous single governance of “government monopoly” with the governance model of corporatism, which create the ensuing subtle changes in relationships between the state and civil society, between the government and the public. The return to the nature of public space of civil society has become the trend in Western administrative buildings.

3.2.2 Impact of Government Reform Movement

The evolution of the value of Western public administration has experienced three

periods, which are efficiency-oriented traditional period, equality-oriented public administration period, market-oriented public management period. Since the 20th century, as the range of public actions of Western countries and government has been widened and management functions of public actions have been strengthened, state and government began to fall into the self-dealing, self-serving public crisis. The reform movement in government arose globally in the nineteen-eighties, aiming at “reshaping the government”, “reconstruct of public sectors”, “new public administration”, etc. Global government reform movement reflects a trend, which is the socialization of public actions, and ultimately becomes service-oriented, citizen participation institutionalized and regularized. Public actions evolves into public service, and the general public would fairly and truly share the benefits of public actions. Basically, it is the change in the traditional administrative values, aiming to improve government efficiency, provide the public with high-quality services, change the government from governor into service provider. The change of the role reveals the shift in value orientation. Western administrative reform has profoundly impacted the practice of administrative buildings: instead of past emphasizing its spiritual function and symbolism, its services and city public space attributes have been valued, as well as the representation of the concept of democracy, and its physical spatial morphology has become more open and transparent.

3.3 Trends of Contemporary Western Administrative Building

The level of urbanization is high in most Western countries, and urban system is based on basic units—a large number of independent towns. Compared with contemporary Chinese administrative buildings, administrative buildings in Western countries have prominent architectural features related to towns, showing diverse characteristics influenced by self-government and public finance of the town: openness and people-first based on democracy, practicality based on the mode of public finance of private ownership, diversification based on different social and cultural backgrounds and innovation. Through some well-reputed existing

examples, the mainstream design ideas and trends of contemporary Western administrative buildings can be summarized.

3.3.1 Public Presence and Openness of Space

For the reflection on old stifling bureaucracy and monumental buildings, for the public's call for the function, emotion and symbolism of administrative building, people hopes to create a sense of public place through cultural and political activities, expressing deeper democratic intentions. Social justice and civil rights have attracted more and more attention, people make effort to seek a positive interaction between state, citizen and society, making administrative building, which is representative of national public authority, gradually return to the free, equal characteristics and pay more attention to its essential nature as an urban public space—publicity and openness.

Built in 1968, the Boston City Hall has municipal offices in the upper part of the building and public space in the lower part. The building has a clear structural logic, inner and outer space integration integrate together, making the bottom interface very open for the public free access, trying to show the government's "people first" attitude and transparency of administration. Another example is the James R. Thompson Center in Chicago, Illinois. Built in 1985, the continuous but stepped-back facade reduces the oppressive sense of the building. In the 48.8m radius circular atrium, workers and visitors enjoy an exhilarating experience of the space from the open corridors, elevators and stairways that line the atrium. The atrium is directly connected with the city's underground transportation hub, organizing the stream of people from the building directly into the city's transport network, while introducing the city crowd into the building. The feature of the building comes from its unique transport design approach and completely open interior space. (Figure 16, 17)

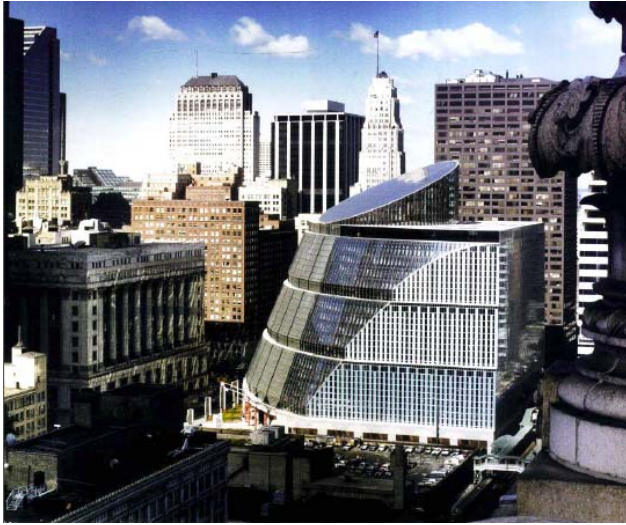


Figure 16 View from the east, Thompson Center

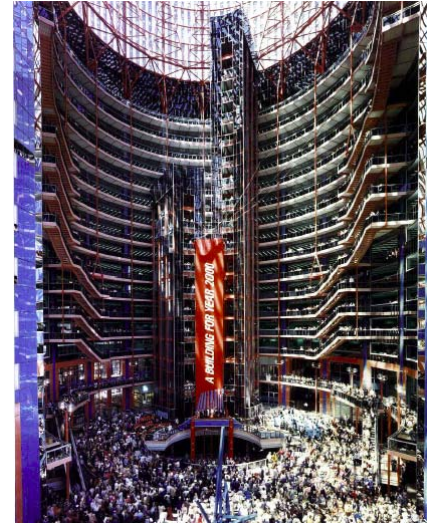


Figure 17 17-story-high atrium

C. W. Fentress and Robert Campbell, *Civic Builders*
(Chichester; New York: Wiley-Academy, 2002), 65.

3.3.2 Multi-function

Contemporary western city life has become more and more diversified, the practical function of administrative building is increasingly complex. Although the scale is not necessarily increasing larger, but there has been a diversification trend of public space in government facilities. Places for public activities and other multi-functional and multi-purpose space in administrative building are increasing, and this kind of public space will continue to expand. Diverse needs and multifunction gathering can effectively enhance the vitality of urban public space, and meet contemporary society's increasingly diverse, multi-faceted demands. In addition to the administrative functions and administrative services, city administrative center also offers a variety of public services such as library, art gallery, theater, cafe, restaurant, etc, enhancing the attractiveness of the building by the multiplying effect of facilities.

Built in 1988, the Stopera is a building complex in Amsterdam, Netherlands, housing both the city hall of Amsterdam and the principal opera house in Amsterdam. The city hall is the city center in the daytime, and the opera house is the center of activity at night. Composite

functions improve the efficiency of the building and the vitality of space effectively (Figure 18). Another example is the Hague City Hall built in 1995, the 800-foot-long, 250-foot-wide building complex comprises a council chamber, a civic wedding room, a large municipal records complex, and the city's central library, as well as a cafe. The large enclosed atrium is known as the largest indoor plaza in Europe.



Figure 18 Stopera, Amsterdam, Netherlands
(Source: *Shi jie jian zhu dao bao*, 1998/4)

3.3.3 Symbiosis of Old and New

Whether for individual and different regional or national culture, to fully express their own cultural values, to pursue of individuality and uniqueness is the most basic and strong spiritual needs, the basic right and legal requirement of each cultural tradition, also the main prerequisite to entering world multicultural dialogue and exchanges. In the era of globalization, the protection of traditional architecture heritage has become a global trend. Most historical town hall buildings in Western countries have very high architectural quality and artistic standard, recording the city's history and culture, therefore, there is a high value of conservation and reuse. Let the old buildings remain in harmony with the contemporary urban environment, revitalize it, and the context of the city is able to continue.

The Murcia Town Hall extension completed in 1998, sits on the main square of the

town, opposite an imposing cathedral. The design chooses not to challenge the plaza's other buildings but instead acknowledges their preeminence, styling itself as a "spectator". One way it does this is by locating its entryway along one of its flanks instead of directly on the plaza. The facade it self stretches one level below grade, further buffering the plaza from the building. The building maintains a delicate balance: it creates a presence on the plaza without dominating it (Figure 19). Another example is the Newcastle Town Hall built in 1988 in Canada, it links the original town hall to a new structure. Retaining the existing building instead of replacing it helped maintain historic continuity. The building has been built about 10 meters behind the old building, creating a three-story-high atrium between them which serves as a civic hall. This space is bounded on one side by a large curved wall that is the project's main organizing element—both a signpost for the whole complex and a backdrop to the historical building. The new building's detailing also echoes the cornice, window proportions and materials of the old building (Figure 20).



Figure 19 Murcia Town Hall extension
Fentress and Robert Campbell, *Civic Builders*
(New York: Wiley-Academy, 2002), 157.



Figure 20 Newcastle Town Hall
Fentress and Robert Campbell, *Civic Builders*
(New York: Wiley-Academy, 2002), 81.

3.3.4 Use of Eco-Tech

Since the 1970s, the intense industrialization has brought serious environmental problems, leading to consequences as global energy crisis, environmental pollution, extinction of

species, global warming, etc. Ecological and sustainable development has become the direction of contemporary urban and architectural development. The trend of eco-design is based on the concern for environment and efficient use of resources. Architectural design has been transformed from “function - space” as single goal into “function - space” and “environment - resource” as dual goals, the connection of these two goal relies on different techniques. For example, maximizing the use of pollution-free, renewable building materials; research on the technology and measures of energy cycle, making full use of solar energy, wind energy and other renewable energy; emphasis on natural ventilation, natural lighting and shading; using vegetation to improve the microclimate; applying large-span lightweight structures to improve flexibility of space; recycling of water resources; garbage treatment and reuse of construction waste, etc. Some newly built administrative buildings in Western countries reflect strong eco-design concepts.

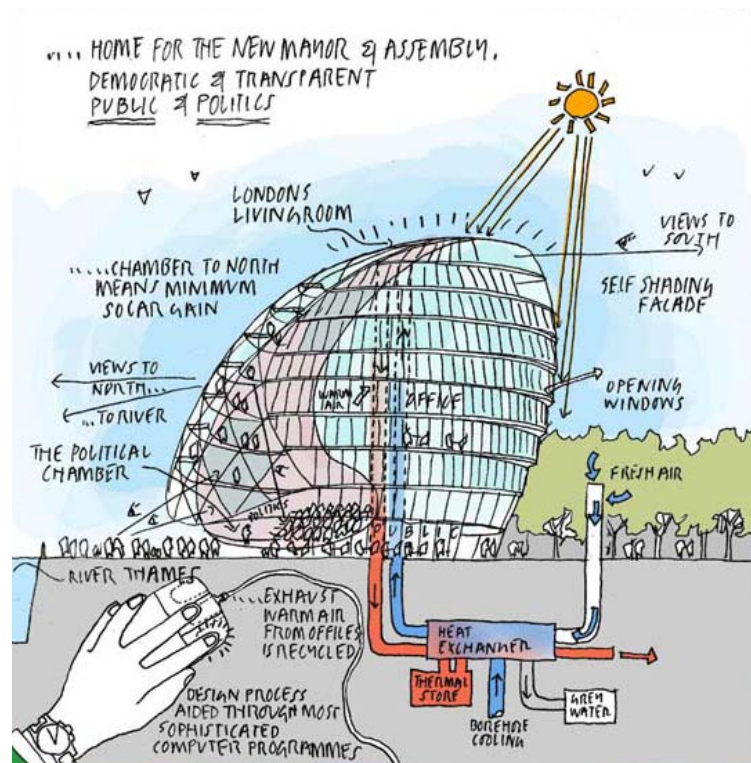


Figure 21 Eco-design concepts of London City Hall
 “City Hall | Projects | Foster + Partners,” accessed April 9, 2014,
<http://www.fosterandpartners.com/projects/city-hall/>.

Built in 2002 the London City Hall designed by Foster uses geometric sphere shape, obtaining maximum the volume while minimizing the external surface area. The building tilts to the south, the upper floor provides shading for the lower space. Offices are naturally ventilated, photovoltaics provide power and the building's cooling system utilizes ground water pumped up via boreholes. Overall, City Hall uses only a quarter of the energy consumed by a typical air-conditioned London office building (Figure 21). Another project by Forster the New German Parliament provides a model for sustainability by burning renewable bio-fuel - refined vegetable oil - in a cogenerator to produce electricity: a system that is far cleaner than burning fossil fuels. The result is a 94 per cent reduction in carbon dioxide emissions. Surplus heat is stored as hot water in an aquifer deep below ground and can be pumped up to heat the building or to drive an absorption cooling plant to produce chilled water. Significantly, the building's energy requirements are modest enough to allow it to produce more energy than it consumes and to perform as a mini power station in the new government quarter. The cupola also drives the building's natural lighting and ventilation strategies. At its core is a 'light sculptor' that reflects horizon light down into the chamber, while a sun-shield tracks the path of the sun to block solar gain and glare.

3.3.5 Depoliticization

Traditional administrative buildings generally had a very strong political meaning, and the image of the building was also serious and solemn. With the development of the Western democracy, the image of the government becomes increasingly open, and governments hope to convey the idea of democracy to the public at least in the form of the building. Administration buildings have been given a variety of public function, becoming a public space for public events. The public nature of the space has been enhanced, and the political nature of the space has been weakened. The depoliticization tendency of design, in other words the democratization of form has become one trend of contemporary Western administrative buildings, which is mainly marked by:

①gentle, modest architectural appearance, trying to form an amiable image of the government, interpreting the democratic spirit of equality; ②transparent building material, making political activities transparent and open, emphasizing the openness and fairness of the state power; ③ introducing the stream of the general public into the political space, showing the operation of power under democratic supervision, in order to prevent injustice; ④ wide range of public services, reflecting the civicness of administrative buildings and its returning to the inherence as public space.

The Portland City Hall (built in 1982) is for the Beginning of postmodern architecture. Three- patterned façade dominated by solid walls , with a deduction from classical architecture classical column keystone and out of various composition. This works completely breaking the previous form of government offices simple cold, brought from neoclassical to Art Deco many associations, but obviously people feel like a popular building facades collage (Figure 22). It makes the city an extremely important public buildings to achieve the hands of professionals from both the public and so easy to understand post-modern design ideals. Another example is the 2004 Scottish Parliament building built by Spanish architect En Riu buildings · Miralles -designed spatial layout and exaggerated body free combination, like a poetic collage of branches and leaves. Epidermis with a strong decorative effect it means that with a clear critical regionalism architecture, stately revolutionized the traditional image of the administrative building , reflecting a depoliticized values (Figure 23).



Figure 22 Portland Public Services Building
Fentress and Robert Campbell, *Civic Builders*
(New York: Wiley-Academy, 2002), 59.

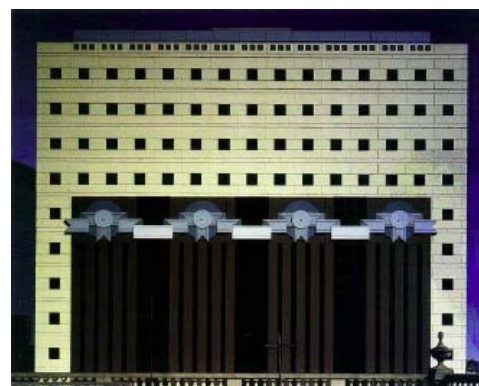


Figure 23 Scottish Parliament Building
Deyan Sudjic, *Architecture and Democracy*
(London: Laurence King Publishing, 2001), 185.

3.4 Summary

The generation of political space is not random or accidental. It reflects different premises and tendencies including the stereotyped architectural design techniques in an era and the ideology of the person in authority. It strengthens the characteristics of power system in the specific era, and may also, to some extent, reflect the general trend of how people perceive spatial relationships at the time. Therefore, such space and the things contained therein can be considered as the annotation of public, politics, cultures and civilizations. Contemporary Western administrative building shows depoliticization trend in design concept, which implies that the meaning of political space of administrative building has been weakened while the meaning of urban public space has been strengthened, and the openness and transparency of space are growing. Regarding the building function, it shows the trend of diversification. It is developing from previous single-function administrative building into building with integrated and complex functions. Architectural form also shows pluralism trend: various artistic styles and aesthetic forms reflect pluralistic values of contemporary Western society.

Chapter 4 | Design Patterns of Western Administrative Building

How do architectural forms represent the image of government agencies? Within a certain period of history, some design patterns of administrative building may become paradigms. For example, the symmetrical structure of a dome with two wings almost become the fixed mode for United States Capitol and other state capitols. But in fact, there are various architectural design patterns of administrative building depending on different historical periods, locations, design concepts, etc., even for city halls which have the same purpose of use. In this chapter, I attempt to use typology theory as the framework to review and summarize the design patterns of Western administrative building.

4.1 Classification Principle of Design Patterns

The scope of study of contemporary architectural typology has been extend from single building to urban area. According to typology theory, the scale of architectural design can be divided into three levels, including:

(1) Macro level—District: places with different natures compose the complex structure of city, and each place has its own independent system. In the entire city system, places reflect functional and morphological characteristics of the overall structure of the system. At the same time, places can reflect its own independence and subjectivity;

(2) Meso level—Block: groups of buildings form the set of elements with overlaid systems, such as road system, system of open space, etc. People perceive the scale of urban spaces and neighborhoods mainly through “void” and “solid”, which mean the organization of spatial relationships and architectural massing;

(3) Micro level—Building

a) Building: the basic element of city. Different types of building form the cityscape. This scale is the study of building morphology and external spatial relationships;

b) Detail: different modes and forms are created under unique cultural and historical backgrounds. It is the scale that users have most visual and behavioral contact with.

The scope of typology covers the process from the entire city to block, and from building to detail. The spatial scale of study has changed dramatically during the process, and there is a big difference in the content of study on different scales. Therefore, from the perspective of typology, the study of design patterns will also be divided into three levels. Specific to the research subjects of this thesis, the classification is:

(1) Macro-level—Location of Western Administrative Building;

(2) Meso-level — Building Group and Exterior Space of Western Administrative Building;

(3) Micro-level—Building and Detail of Western Administrative Building.

Those who need a specification is, from the macro level to the micro level, various elements in the overall context always interact and complement with each other, and there is some overlap of these concepts at different levels. The design patterns summarized in this thesis are the most fundamental ones at each level.

4.2 Design Patterns at Macro-level: Three Types of Building Location

Spiro Kostof wrote “The presence of a ruler, of a ruling elite, is considered a necessary condition of the pre-industrial city, in Sjoberg’s classic account of it. The city helps to sustain the ruling elite, and in turn the city’s own health, its growth and survival, requires a well-developed power structure.”¹⁹ The location of administrative building in the city shows its status and importance unlike other buildings.

¹⁹ Spiro Kostof, *The City Assembled: The Elements Of Urban Form Through History* (Boston: Little, Brown, 1992), 74.

4.2.1 Geographic Prominent Location

For some European cities, functional divisions are overlapped with the system of geographic classification. The distinction of hilltop from valley settlement was a common one in the Middle Ages, and it had political resonances. The hilltop was where a town usually began, with a princely citadel, a cathedral, a basic nucleus of feudal authority. Down in the valley was a civil core of craftspeople and traders. Since ancient Greece, the classical ideal of establishing an universal civilization based on extensive democratic principles dominates the political practice of the Western world. Classical democracy not only affected the formation of later constitutions, but also created architectural traditions. The tradition of taking geographic prominent location specifies quite a number of administrative buildings' location in cities.

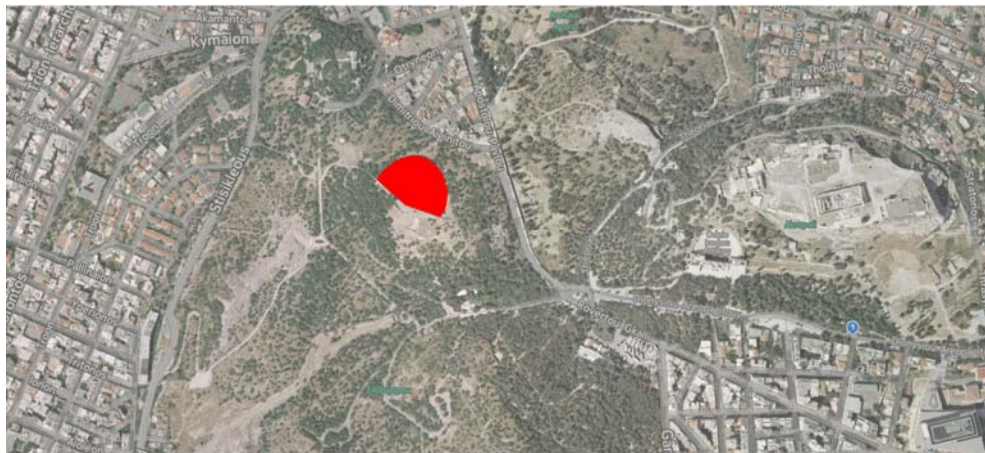


Figure 24 The Pnyx and surrounding urban areas

Map source: <http://here.com>

Edited by Tao Yang

As one of earliest political meeting places, the Pnyx located west of the Acropolis applied this design pattern (Figure 24). In ancient Greece, every Athens citizens was equal before the law, and had equal right to speak at the city-state's political assembly. Important decisions had to be debated in a public forum, and had to be voted by all citizens. In the fourth century BC, rights and scale of citizens meant that politics was held in public. Beginning as early as 507 BC, the Athenians gathered on the Pnyx, which is a semicircular hillside, to host their popular assemblies. In the 5th century BC, the Pnyx was designed as a semicircular masonry with a large

flat platform of eroded stone set into its side. The flat stone platform was the bema, the "stepping stone" or speakers' platform with carved steps. Its shape ensures that each participant can see the speaking people and other participants.²⁰ (Figure 25)

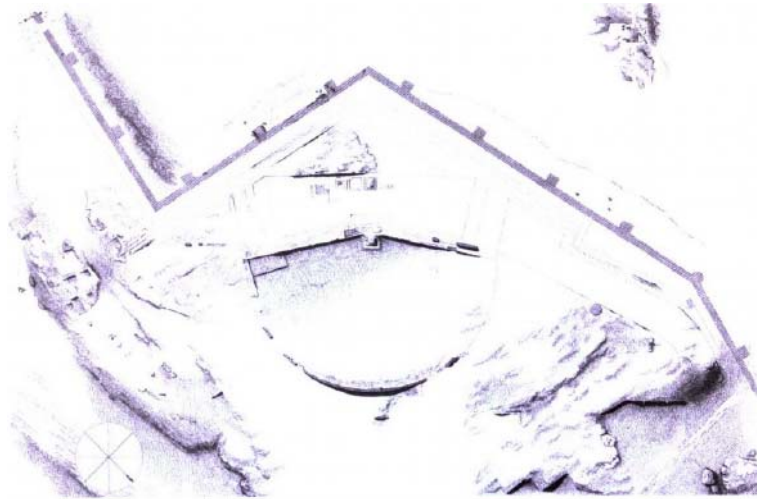


Figure 25 The Pnyx
Deyan Sudjic and Helen Jones, *Architecture and Democracy*
(London: Laurence King Publishing, 2001), 7.



Figure 26 Palazzo Senatorio and surrounding urban areas
Map source: <http://here.com> Edited by Tao Yang



Figure 27 Palazzo Senatorio
Photo taken by Tao Yang

The Capitoline Hill is the highest one of the seven hills of Rome. Starting from the beginning of the city of Rome, it was the important religious and political center (Figure 26). In ancient Rome, there were temples and other religious buildings, the Tabularium, and the Colossus of Constantine. In the Middle Ages, the Palazzo Senatorio ("Senatorial Palace") was built atop the Tabularium, which had once housed the archives of ancient Rome, and the Palazzo

²⁰ Deyan Sudjic and Helen Jones, *Architecture and Democracy* (London: Laurence King Publishing, 2001), 8.

The United States Capitol originally built in 1793-1800 is another example of this design pattern. Pierre L'Enfant, as he began to develop his plan for the new Federal City in 1791, chose to locate the "Congress House" on the crest of the hill, facing the city, a site that he characterized as a "pedestal waiting for a monument" (Figure 28). In 1793 George Washington, along with eight other Freemason, laid the cornerstone. Not long after the completion of both wings, the Capitol was partially burned during the War of 1812. After the War of 1812, the Capitol has been expanded several times and eventually formed today's structure. The Capitol's building is marked by its central dome above arotunda in the central section of the structure. The statue on top of the dome is the "Statue of Freedom". The north wing is the Senate chamber and the south wing is the House of Representatives chamber. Though it has not been the geographic center of the District of Columbia, due to its geographic location and size, it can be seen from many places in Washington, D. C.

Geographic prominent location includes not only the high ground in cities, but also other special locations in cities. Such as the Stockholm City Hall in Sweden designed by Ragnar Östberg, built in 1911-1923. It stands on the eastern tip of Kungsholmen island. Kungsholmen is an island in Lake Mälaren in Sweden, part of Stockholm City center. The City Hall faces water on both sides, surrounded by a piazza, a courtyard and a interior open space (the Blue Hall). Nearly eight million red bricks were used. On the 106 meters high tower of the City Hall, people can overlook the City of Stockholm.



Figure 29 Ottawa City Hall
Fentress and Robert Campbell, *Civic Builders*
(New York: Wiley-Academy, 2002), 105.



Figure 30 European Parliament
Fentress and Robert Campbell, *Civic Builders*
(New York: Wiley-Academy, 2002), 169.



Figure 31 European Parliament and surrounding urban areas

Map source: <http://here.com> Edited by Tao Yang

There are similar examples like Ottawa City Hall, a preeminent example of Modernism in Canada. It is located on Green Island in the Rideau River, the sole building on the island (Figure 29). “As an administrative building, instead of proposing a single, large building, the design take advantage of the impressive pastoral site to create a place of community with a series of indoor and outdoor spaces.”²² The northern walls of the building rise dramatically out of the river - cylindrical shapes at the water’s edge offsetting a tall, rectangular observation tower that proclaims the structure’s civic presence in the city’s skyline. Another example is the European Parliament in Strasbourg, France. The site lies at the point where the Rivel Ill flows into a canal linking the Rhine and Marne rivers. The gigantic structure curves along the confluence of waterways (Figure 30, 31).

4.2.2 City Center

There are two possible meanings of city center - it may refer to the most concentrated area of public activities in the city, and it can also refer to the geometric center of the city.

²² C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 105.

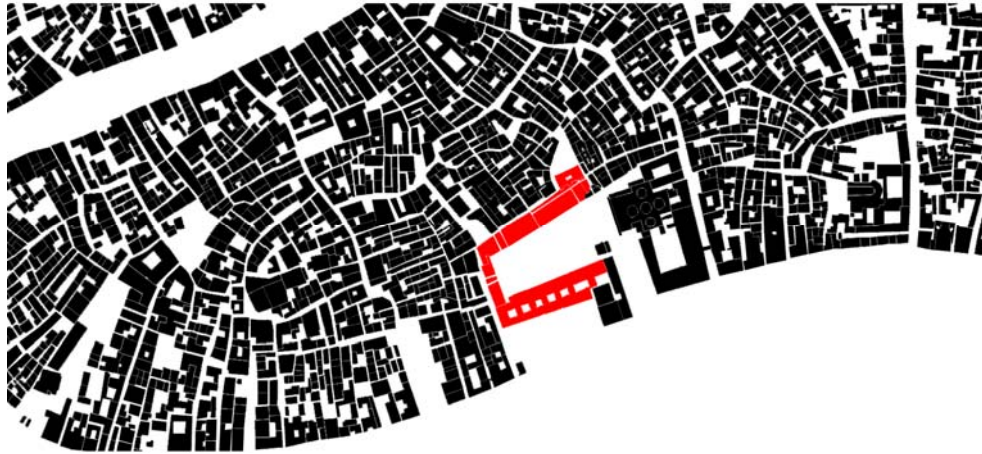


Figure 32 Figure-ground diagram of Piazza San Marco and surrounding urban areas
by Tao Yang



Figure 33 Figure-ground diagram of Piazza della Signoria and surrounding urban areas
by Tao Yang

“As was the case in Italy in the 14th-15th centuries, the lord might seek to move into the center of town to signify his control of the communal apparatus and the legitimacy of his rule.”²³ This design pattern is very common in the Middle Ages. Famous examples include the Piazza San Marco in Venice, Italy (Figure 32) and the Piazza della Signoria in Florence, Italy (Figure 33). As the seat of city power and the place of democratic life, medieval town halls were not only the center of municipal administration, but also the center of the city’s everyday life. Town halls were often closely related to other secular buildings, sometimes were also used as market halls, and were often integrated with markets (ground floor as commercial space). The

²³ Spiro Kostof, *The City Assembled: The Elements Of Urban Form Through History* (Boston: Little, Brown, 1992), 79.

importance of cities' economy was reflected. Town hall buildings and the plaza in front of it were more and more tightly integrated., which gradually became an integral part of the city center and the most active public place.

Many administrative buildings using this design pattern still retain the original features, and it is more common in European cities. Such as the Murcia Town Hall - In this case, an extension is built onto the building with a centuries-old context, integrating modern structures with ancient ones on the plaza (Figure 34). “The building maintains a delicate balance: it creates a presence on the plaza without dominating it.”²⁴



Figure 34 Murcia Town Hall

Fentress and Robert Campbell, *Civic Builders*
(New York: Wiley-Academy, 2002), 154.



Figure 35 Philadelphia City Hall

Fentress and Robert Campbell, *Civic Builders*
(New York: Wiley-Academy, 2002), 23.

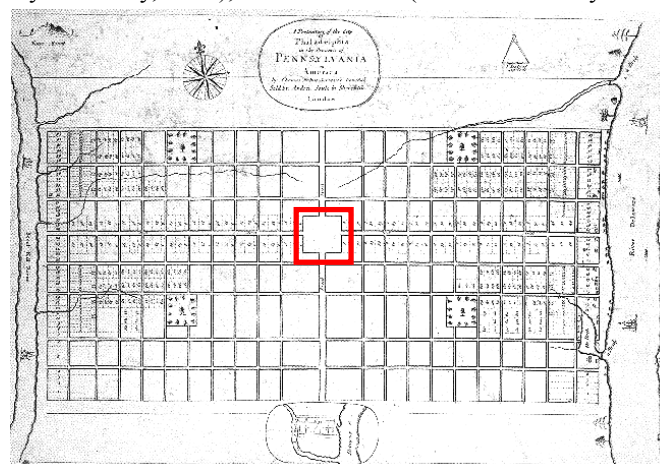


Figure 36 1681 Philadelphia master plan

Source: “William Penn Plans the City” <http://xroads.virginia.edu/~cap/penn/pnplan.html>

²⁴ C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 155.

Indicating the importance of the governing body through the centrality of the site is another purpose of this design pattern. For example, in the grid-planned towns of the American Midwest and Plains, the county courthouse is typically situated in a square at the geometrical center point, often given tall, symmetrical form to underscore its preeminence. A prime example of overwhelming building in an absolutely central position is the Philadelphia City Hall (Figure 35). "It rises at the very geometrical center of the gridded city plan that William Penn laid out for the city in 1681, on what he designated Central Square."²⁵ (Figure 36) Built over the period 1872 to 1901 to designs by John McArthur, Jr., the structure is said to be the world's tallest masonry structure, rising 548 feet to the top of its crowning statue of Penn. An unwritten agreement that no building in the city could rise higher than this statue was observed until 1989, when the first of several office buildings exceeded that limit.

4.2.3 Urban Fringe or New City

"The American concept of the civic center, the chief jewel of the City Beautiful movement, is an interesting modern attempt at a unified administrative scheme, merged here with cultural institutions."²⁶ The association of administrative buildings with the monuments of bourgeois culture had European precedent. Vienna's Ringstrasse is an example. This design pattern is often the product of unified administrative planning - creating a new key location by developing a planned civic center in the urban fringe or new city and giving the administrative building the place of honor in its own special precinct. The Palace of Versailles is a representative of administrative buildings of the absolute monarchy period. All functions of the government agencies and all the court were moved into one large building: not only the monarch's place but also the administrative center of the kingdom. Its simple composition, strong axial relationship and strong primary-secondary relationship all became the conspicuous symbol

²⁵ C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 21.

²⁶ Spiro Kostof, *The City Assembled: The Elements Of Urban Form Through History* (Boston: Little, Brown, 1992), 80.

of monarchical power. Evolving with the palace, the geometric gardens of Versailles was built. Strong axis and symmetrical layout are admired and emulated even today (Figure 37).



Figure 37 Figure-ground diagram of Palace of Versailles and surrounding urban areas
by Tao Yang



Figure 38 Figure-ground diagram of United States Capitol and surrounding urban areas
by Tao Yang

In the practice of American cities, for example San Francisco and Cleveland and many others, the design of civic centers was inspired by the example of the Washington Mall, a feature of L'Enfant's plan for the capital, "as reinterpreted by Daniel Burnham and his colleagues in the McMillan scheme of 1902. Administrative and cultural buildings of a uniform Classical design were symmetrically disposed around a mall, creating a formally landscaped monumental core." (Figure 38) This grouping, according to John Nolen, a leading planner of the day, was convenient for conducting official business; created "an impression of dignity and appropriate beauty" for

citizen and stranger; and formed “a rallying point for the city’s life. Here the best impulses may crystallize, inspired by the noble character of the edifice, into devoted action for the public good.”²⁷ As part of this ideal, this design pattern still plays a role in American towns recently, where town hall, fire department, police headquarters and the public library come together, stately displaying the image of the city.

San Francisco is not a political capital, but was at the time that its city hall went up the economic center of the entire US West Coast, and apparently felt justified in building its own capitol building. The creation of San Francisco’s civic center is an ambitious object lesson for “urban fringe or new city” this design pattern. In a city famous for its precipitous hills, a large, virtually flat acreage was designated early in the twentieth century for a tightly coordinated set of institutions - state and federal offices, library, opera house, civic auditorium, etc. - set along an axial park leading to the centerpiece of the precinct: the City Hall completed in 1916 to designs of Arthur Brown (Figure 39). The building is an excellent example of the Beaux-Arts Classical Revival Style, with one of the most elegantly proportioned domes in the world. Nevertheless, for Americans accustomed to a codified symbolism for domes, the building has just the form and size expected for a state capitol. “The civic center as a whole has remained oddly unrelated to the rest of the city, and geographically isolated from the places where residents live and work or tourists visit.”²⁸



Figure 39 San Francisco Civic Center
Spiro Kostof, *The City Assembled*
(Boston: Little, Brown, 1991), 116.



Figure 40 Fresno City Hall
C. W. Fentress and Robert Campbell, *Civic Builders*
(Chichester; New York: Wiley-Academy, 2002), 86.

²⁷ J. Nolen, “City Making,” *The American Architect* 1:1, Sept. 1909, 18.

²⁸ C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 21.

The Fresno City Hall in California is placed on axis with an avenue that extends from the local courthouse past other civic buildings (Figure 40). This creates a tree-shaded mall that links all the city's civic structures, including a library, a historical water tower, and even the jail—the design of this size is rare for many small American towns, but also exists.

The Australian parliament building in Canberra is a more extreme example with this design pattern. As the federal capital of Australia, Canberra is a city specially for administrative functions. It was located between the two major cities in Australia, Sydney and Melbourne, a unbiased solution for the controversy over the choice of capital between the two cities.²⁹ The parliament house is the first permanent parliament building in the history of Australia, and the outline of the design competition clearly showed that Australia to create a building which can be symbolically comparable with the Palace of Westminster in the United Kingdom and the United States Capitol. The project includes not only two legislative chambers, the executive entry, the prime minister's suite and courtyard, and all the ministerial offices as well. Mitchell/Gigurgola & Thorp Architects won the commission in an international design competition. The city's avenues and visual axes radiate from the rise called Capital Hill. "The federal parliament building complex encompasses 300,000 square meters of office, parliamentary and ceremonial space on a 32-hectare site at the focus of the master plan, which proposed open spaces instead of monumental structures at all focal points." In deference to the master plan, the building's design and form re-state the profile of the original hill occupying the site. From the four corners of the perimeter road, grassy slopes run up to an open roof terrace surmounted only by an iconic flag mast, which marks the complex and suggests its massive scale (Figure 41).

²⁹ Deyan Sudjic and Helen Jones, *Architecture and Democracy* (London: Laurence King Publishing, 2001), 117.

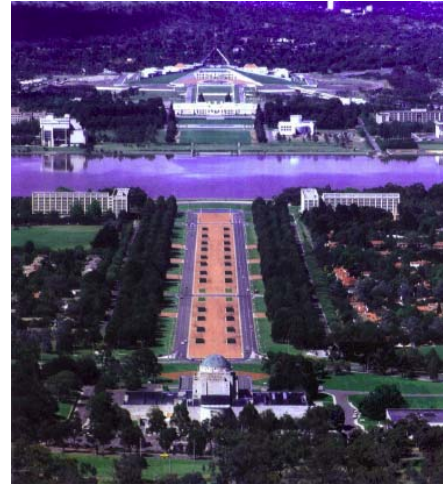
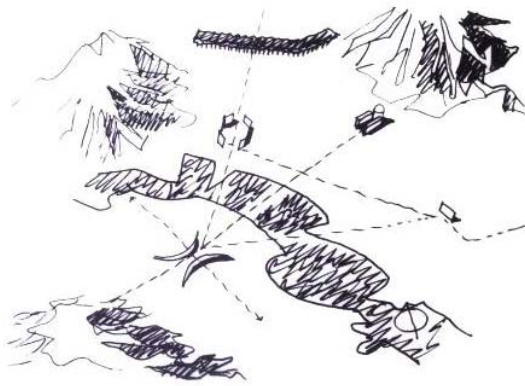


Figure 41 Australian Parliament Building Complex
 Deyan Sudjic and Helen Jones, *Architecture and Democracy*
 (London: Laurence King Publishing, 2001), 118.

4.3 Design Patterns at Meso-level: Four Forms of Square Space

The study of administrative building at meso-level includes the types and design principles of external space, scale, enclosing forms, interface features, etc., with a certain range of urban space. Through the analysis in chapter 2, it can be found that the development of Western administrative building types is closely related to square space: the oldest legitimating role of democracy was enshrined in Greek agoras and Roman fora, and has often been given expression in historical reconstructions of Greek and Rome architecture. It was reinvented during the Middle Ages in the urban piazza, and then again in the Renaissance place, or later the American town square. To a certain extent, the square is the center stage of all democracy. It legitimizes what representatives do, it keeps presidents and judiciary in check, and it gives a lead to parliament and changes politics. The agora and forum, and then the piazza, square or American meeting hall became the architectural expression of ‘the people’, because they provided a place of citizens to see themselves speak and act in public. Although with different forms, square space is shared by Western administrative buildings at meso-level.

Being the prototype of Western administrative building initially, later on municipal

activities were moved into inside the building, administrative buildings had not been transformed into services for taxpayers —town halls until the Middle Ages which were closely related to piazzas, together with churches and other public buildings, public spaces were formed in the heart of the city. Open spaces like squares embody Western democracy and the philosophy advocating freedom. Moreover, this idea was extended to the interior space of building, “atrium space” was created - an open, public space was formed inside the building. It is a place with intertwined human sight, providing the environment in which people can see each other and can be seen by each other. Atrium space, this spatial design approach has been widely used in a larger number of public buildings, which can be seen as an extension of the square tradition.

As a summary of the design patterns of Western administrative building at meso-level, this section generalize it as four: multifunctional enclosed square, ceremonial square, interior square, pass-through administrative building (Figure 42). The four design patterns are analyzed and different examples have been given. It should be noted that the four design pattern are not applied independently, but also two can be used in one building, for example, the exterior space of a pass-through administrative building could be a ceremonial square.

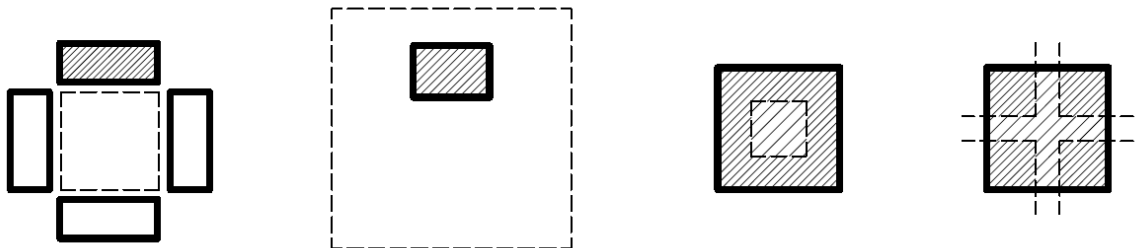


Figure 42 Design patterns at meso-level
(Multifunctional Enclosed Square, Ceremonial Square,
Interior Square, Pass-through Administrative Building)
by Tao Yang

4.3.1 Multifunctional Enclosed Square

“History has proved that the origin of city squares is not only the consideration of showing rulers’ idea, but also a very practical result of functional demand.”³⁰ Thus, administrative buildings of ancient Greece and medieval Europe were often located convergently together with other public buildings (such as church) of the city, enclosing endocentric municipal squares which don’t have a fixed layout. Such administrative square are the city’s central square: on the one hand because it is at the center of urban spatial structure, on the other it is the center of city’s public activities. This kind of square is a microcosm of the entire city life, so it has been called as “the drawing room” of the city. Such space includes almost all aspects of public life in the city, and the activities in the space are diverse and complex, even difficult to tell which type of activity is dominant. It is also efficient because different activities can always occur in the space. Uninterrupted events make the square space vivid. As the driving force and the result of city’s formation and development, medieval municipal squares came from city life. They not only attract the attention of tourists, but also the center of people’s life, even today.

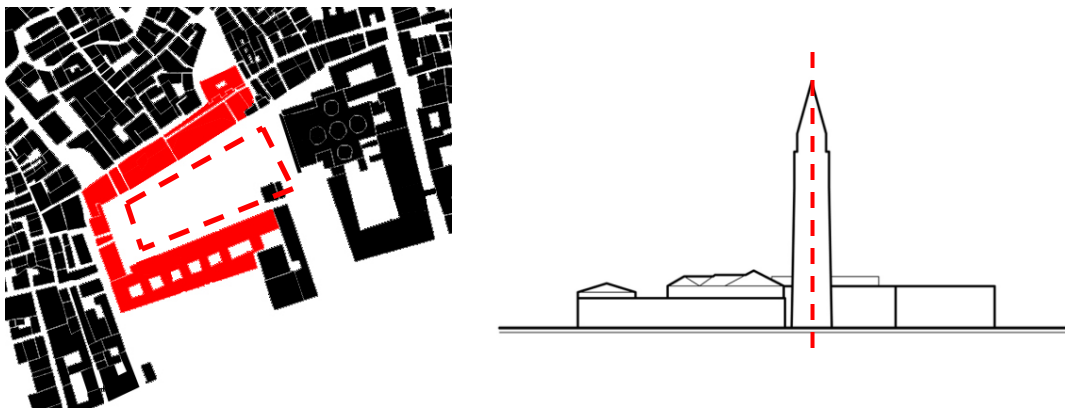


Figure 43 Analytic diagrams of Piazza San Marco
by Tao Yang

As this kind of square was the results of long-term natural urban development, when the city hall and church were adjacent or close to each other, symmetry of massing or facade was not necessary. For example, in the Piazza San Marco in Venice, the church and the bell tower are

³⁰ Yongjie Cai, *Cheng shi guang chang* (Nanjing: Dongnan da xue chu ban she, 2006), 131.

prominent, while the Doge's Palace and the Procuratie are organized for the purpose of enclosing the square, and the massing relationship formed by the buildings is not strictly symmetrical (Figure 43).



Figure 44 Analytic diagrams of Piazza della Signoria
by Tao Yang

Piazza della Signoria is an L-shaped square in front of the Palazzo Vecchio in Florence, Italy. It was named after the Palazzo della Signoria, also called Palazzo Vecchio (Florence Town Hall) (Figure 44). It is the focal point of the origin and of the history of the Florentine Republic and still maintains its reputation as the political hub of the city.³¹ It is the meeting place of Florentines as well as the numerous tourists, located near Ponte Vecchio and Piazza del Duomo and gateway to Uffizi Gallery. The Loggia dei Lanzi next to the town hall building is an open-air sculpture gallery of antique and Renaissance art, and there are also various statues in this square. In ancient Rome, the piazza was already a central square, surrounded by a theatre, Roman baths and a workshop for dyeing textiles.³²

4.3.2 Ceremonial Square

After the Renaissance, ceremonial square became the dominant trend in the space accompanied with administrative building. It is generally believed that perspective was invented

³¹ "Florence: The City Layout," in *Encyclopædia Britannica*. 2007.

³² "Italy: Savonarola," in *Encyclopædia Britannica*. 2007.

in the Renaissance by historians, thus, conscious sight guide appeared in the design of later administrative squares, showing authority of the ruler as the most common purpose. It can be found in the history of city square that spatial entities (such as town halls) with specific sociological meaning always give particular spiritual character to the square space. The spiritual character will naturally be transferred to the persons in this space, impacting mentality and behavior of people. Therefore, most political demonstrations occur on the ceremonial square in front of City Hall. In this design pattern, important administrative stands in the center of square or dominates the space, and its massing and facade design are mostly symmetrical form. This form of administrative square reflects axuality and centrality of the space created by the existing of important building.



Figure 45 Analytic diagrams of Piazza del Campidoglio
by Tao Yang

The origin of ceremonial square can be traced back to the ancient Rome, but Rome did not regain its glory days of Empire until the Renaissance. In 1420, the pope returned to Rome, making it once again become the heart of religion in the West. Under the popes from Pius IV to Sixtus V, Rome became the centre of the reformed Catholicism and saw the installment of new monuments which celebrated the papacy's restored greatness. The popes and cardinals of the 17th and early 18th centuries continued the movement by having city's landscape enriched with baroque buildings. The main approach was adding axial structure into the irregular medieval urban fabric, in which axis, especially diagonal axis was the most representative element, establishing a strong sense of space order and the dramatic effect of urban landscape. The Piazza del Campidoglio designed by Michelangelo can be considered as the important work connecting

the Renaissance and the baroque (Figure 45). The square space is not large: “the height of the trapezoidal plan is 76 meters, the short side is 41 meters long, the broad side is 60 meters long, covering an area of about 39 hectares.”³³ The spatial organization of the square made good use of the existing buildings and terrain, new buildings and existing old buildings together form a unified form of massing and space interface, creating a complete image of the entire square space. In the reconstruction process of the original old building, Michelangelo designed a solid base to raise the Palazzo Senatorio ("Senatorial Palace"), forming the main scenery and the dominator of the square. The short side of the square is completely open, a monumental wide-ramped stair (the cordonata), gradually ascending the hill to reach the high piazza, and the trapezoidal plan reinforces the dramatic effect from low to high, fully demonstrating the facade and the bell tower of the main administrative building, making the equestrian statue in the middle of the square even more prominent.

Then squares of the following Baroque and Classical period are the most typical representatives, such as the Palace of Versailles and its square (Figure 46). The squares of the periods are spectacular, but the diversity of people’s activities in the square space was not taken into account, possible activities are limited to: political rallies and demonstrations, military parade, political and religious rituals. So its popularity is always less than the medieval city spaces.

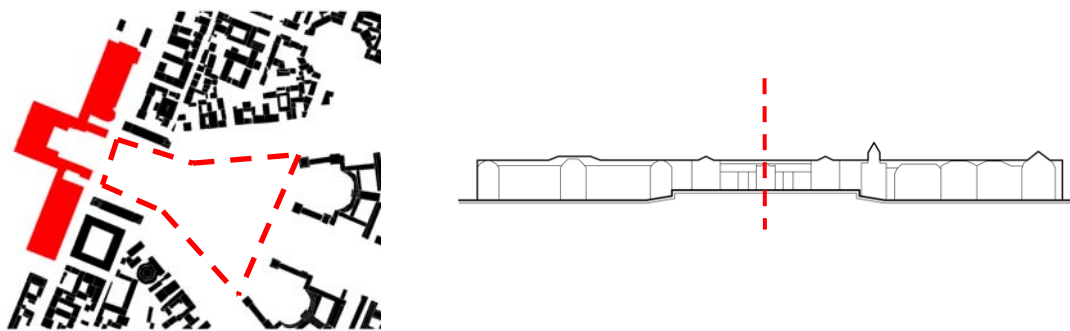


Figure 46 Analytic diagrams of Palace of Versailles
by Tao Yang

³³ Yongjie Cai, *Cheng shi guang chang* (Nanjing: Dongnan da xue chu ban she, 2006), 44.

It might also be noted that, even in modern times, ceremonial administrative square is still the design pattern used by part of Western administrative buildings (although not necessarily emphasize axis). For example, the Boston City Hall built in 1968, highly sculptural “brutalist” style building occupies the visual focus in the square. Since its completion, there is a lot of controversy about the building. Many people admire its sculptural massing and “brutalist” style, more people think it is too exaggerated and lack context and affinity. The key reason is that the ceremonial square is too broad and empty, without spaces division and facilities supporting human behavior.



Figure 47 Analytic diagrams of German Parliament Building
by Tao Yang



Figure 48 Security station in the square
Photo taken by Tao Yang



Figure 49 Fence in front of the Entrance
Photo taken by Tao Yang

In addition to shaping the authority of administrative building, ceremonial square also provides more buffer space so that it can meet the needs of security of the administrative building

better. It is perhaps another important reason for the use of ceremonial square for administrative buildings (the higher the level of the building the more so). Such as the Reichstag (German Parliament building) in Berlin, even after Norman Foster's renovation design in 1999, the large ceremonial square in front of the building still remains, and a security station is located in a corner of the square—people can not enter the building through the grand steps in front of the main entrance, instead, visitors must go through security procedures then enter the building through the ramp on the side of the entrance (Figure 48, 49).

4.3.3 Interior Square

Traditionally, the principal interior space of the civic building has been the rotunda under its dome or cupola. In some case, the central rotunda has been expanded to embrace a ring of surrounding mezzanines to create a space more in the nature of an indoor public square. But it remains clearly an interior space with visual emphasis on the structure that shelter it.

For example, the Stockholm City Hall, the major interior space of it is a civic interior with architectural features of an open plaza. Despite its vast size and reddish brick walls, it is called the Blue Room, which is the setting for the Nobel Prize presentations every year. Surrounding arcades suggest that the Blue Room is located between buildings rather than inside one, and a featureless flat ceiling above a clerestory plays down the act of roofing the room. Like the powerful massed exterior of the structure, the room is relatively austere in detail (Figure 50). “Designed by Ragnar Ostberg and completed in 1923, this landmark structure epitomized the Scandinavian National Romantic style, with its back-to-our-roots inspiration in medieval vernacular architecture.”³⁴

³⁴ C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 23.

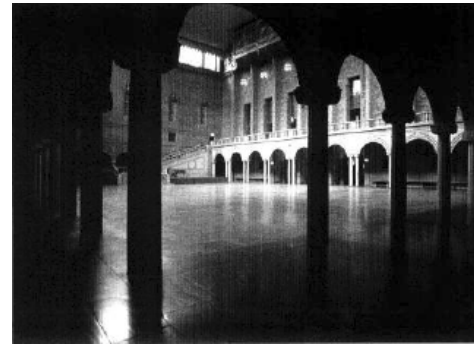
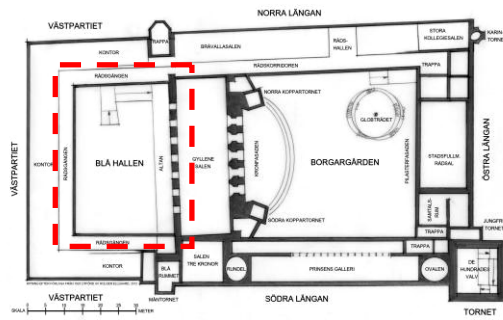


Figure 50 Blue Room in Stockholm City Hall
C. W. Fentress and Robert Campbell, *Civic Builders*
(Chichester; New York: Wiley-Academy, 2002), 24.

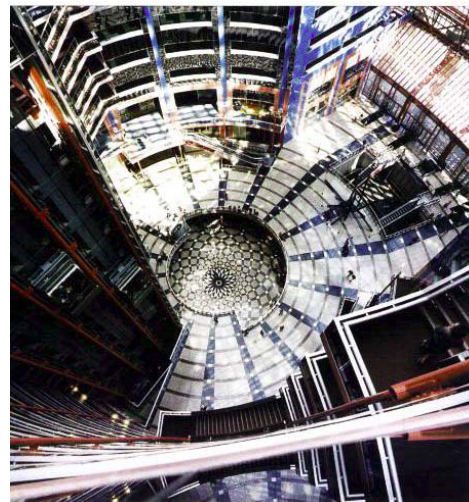
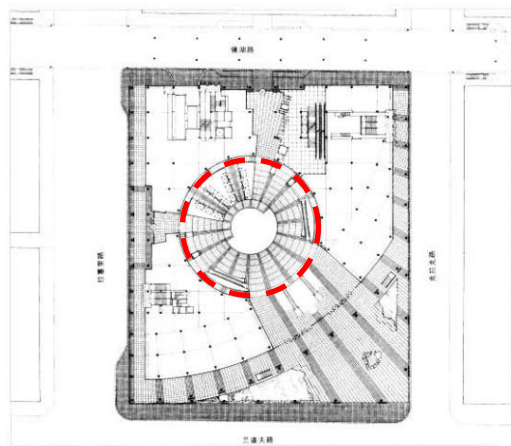


Figure 51 James R. Thompson Center, Chicago, USA
C. W. Fentress and Robert Campbell, *Civic Builders*
(Chichester; New York: Wiley-Academy, 2002), 64.

It is worthwhile to note that this design pattern is also applied in many contemporary Western administrative buildings as a way enhancing accessibility and equality of space. For example, the lighting atrium of the James R. Thompson Center in Chicago is directly connected to the city's metro system., organizing the stream of people from the building directly into the city's transport network, while introducing the city crowd into the building. In the "160-foot-diameter, multi-story central rotunda. Workers and visitors enjoy an exhilarating experience of the space from the open corridors, elevators and stairways that line the atrium."³⁵

³⁵ C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 63.

The feature of the building comes from its unique transport design approach and completely open interior space. Open interior space makes administrative building become an important place supporting public meetings, also the node of urban transport system. In pursuit of practical function, democracy and openness, the external image of administrative building is also taken into consideration at the same time (Figure 51).

4.3.4 Pass-through Administrative Building

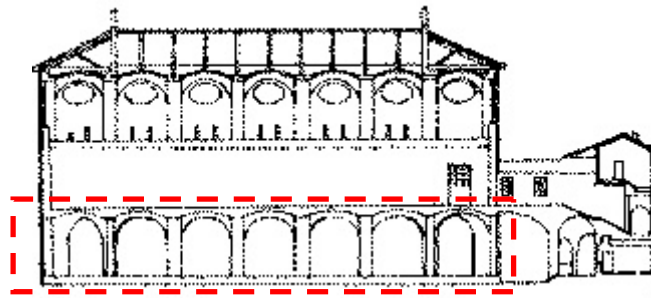


Figure 52 Palazzo della Ragione, Milan, Italy
Edited by Tao Yang

Even before the Modern Movement advocated buildings raised on columns, administrative building with open ground floors had been common. When city halls first appeared as purpose-built structures in medieval Europe, they were often raised above open arcades that housed public markets, as were the thirteenth-century government meeting halls of Milan and Como, Italy (Figure 52). Perhaps in the congested cities of the time, the air space above market squares provided a fortuitous central location, and the raised hall offered the added benefit of a sheltered market. Widely accepted as a pattern for civic buildings in Europe, the scheme was transplanted to America, where the first colony house in Boston, for instance, had an open ground-floor market. The Colonial capitol at Williamsburg, Virginia, displays a vestige of this in an open central passage.

A classic modern example of the pass-through administrative building is the Boston City Hall of 1968, which rises from its plaza on thick columns, with only a small entrance

enclosure and a light well for below-grade floors interrupting the public passage through (Figure 53). In this case, there is a modest but obvious place where one enters the interior, relieving the way-finding confusion often found in open-ground-floor buildings.

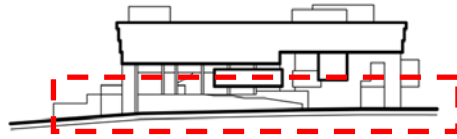


Figure 53 Boston City Hall
by Tao Yang

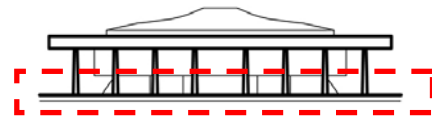


Figure 54 Hawaii State Capitol
by Tao Yang

A related example is the state capitol of Hawaii in Honolulu. Here the two houses of the legislature rise from reflecting pools on either side of an open passage into a central roofless atrium. Four floors of offices are supported on tall columns that surround the atrium and form deep colonnades around all four sides of the building (Figure 54). The scheme is undoubtedly meant to underscore Hawaii's mild all-year climate and to differentiate the capitol of these ethnically diverse islands from the European-derived capitols of most other states. But, at the same time, it is closely related to the Modernist ideal of the structure raised on columns.

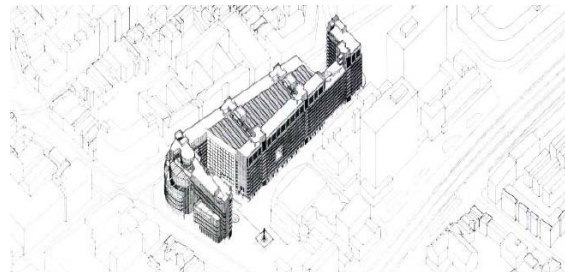
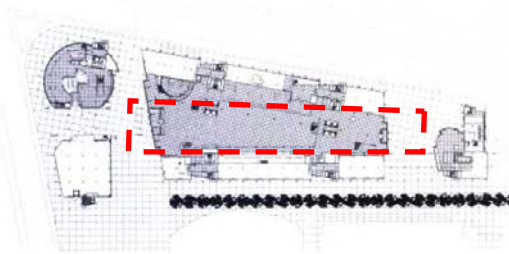


Figure 55 Hague City Hall and Library, Hague, Netherlands

C. W. Fentress and Robert Campbell, *Civic Builders*
(Chichester; New York: Wiley-Academy, 2002), 127. Edited by Tao Yang.

A building may also have interior passage as square and be highly permeable to the public at the ground level, without being open to the air. A fine example is Richard Meier's City Hall in The Hague. "The 800-foot-long, 250-foot-wide Hague City Hall and Library... The

greatest part of the building is taken up with local government offices that are disposed in two horizontal office slabs - one 12 stories high, the other 10 stories. These diverge from each other at an angle of 10.5 degrees in response to the wedge-shaped site... creating a large enclosed atrium between them.”³⁶ (Figure 55) Several doorways from different streets lead into a light-filled atrium. Lining its interior are convenient counters for licenses and such, along with exhibition spaces and cafes.

4.4 Micro-level Design Patterns — Architectural Design Influenced by Three Main Factors

4.4.1 Design Patterns Influenced by Symbolism

4.4.1.1 Manifestation of Political Relations

First we shape our buildings, then our buildings shape us.

Winston Churchill³⁷

With the eighteenth-century move away from monarchy and toward democracy in various parts of the Western world, architects began to look for a way to fashion buildings that would serve this ideal. Early on, architects based their designs largely on palace architecture. Later, the Neoclassical style re-created, rather than simply evoked, Greek and Roman styles, as if to make them synonymous with democratic thought. However, none of these early designs served the individual or focused on the citizen; instead, the “express a concept of authority that is imposed”³⁸. The Neoclassical in particular speaks of probity and responsibility, of rigid regulation even. Such a structure may intimidate by fatiguing, by overshadowing the visitor. The

³⁶ C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 127.

³⁷ Deyan Sudjic and Helen Jones, *Architecture and Democracy* (London: Laurence King Publishing, 2001), 2.

³⁸ Charles T. Goodsell, *The Social Meaning of Civic Space: Studying Political Authority through Architecture*, University of Kansas Press (Lawrence:1988), p.53.

hike up to stairs of these administrative buildings can be daunting, the building itself almost oppressive. The main level entry is on what would normally be two or three stories above grade. As one sets foot inside such a building, one feels small. A building like this seems to say that the people are here to serve the government and not the other way around. The aim may be to awe, but the effect is alienating.





More than the outside of public buildings has changes; council chambers, which are the heart of these buildings, have been transformed as well. Charles T. Goodsell of Virginia Tech's Center for Public Administration and Policy, who has written extensively about the relationship of architecture to government³⁹, divides the history of American council chambers into three periods: the Traditional Era (1800-1900), the Mid-Century Era (1930-1960), and the Contemporary Era (1960-present). In the first, he sees the assertion of public authority. In the design of the second, he finds a confrontation: The city council chamber becomes a "down-to-earth arena in which officials were to be publicly accountable and socially unpretentious". The last brings the governors and the governed into much more intimate proximity. Tracking this move from distance to intimacy over 200 years, Goodsell finds that "a general trend becomes clear: As the political distance between the governors and the governed has been reduced, a new intimate political relationship has been expressed in , and perhaps encouraged by, the design of city council chambers."

4.4.1.2 Components Combination

Regarding the plan form of administrative buildings, its combinations can be divided into the following five types: plate and its variants(L-shaped and curved) , tower and twin-tower, composite form, and cluster and integrated groups, freeform. Different forms have different scope. (Table 4.1)

³⁹ Charles T. Goodsell, *The American Statehouse: Interpreting Democracy's Temple*, University of Kansas Press (Lawrence:201), and, with Nancy Murray, *Public Administration Illuminated and Inspired by the Arts*, Praeger (Westport, Corn.:1995).

Table 4.1 Plan forms of administrative buildings

Form	Diagram	Scope
plate and its variants (L-shaped and curved)		small, single-function administrative building
tower and twin-tower		wide range of applications
composite form		can be combined with square or garden
cluster and integrated groups		reflect good integrity
freeform		architectural expression of individuality

by Tao Yang

While administrative buildings in the Classical tradition often indicated the location of components, such as the House and Senate wings of numerous capitols, these parts were subordinated to the whole, its unity typically asserted by a central dome. But with the Modern Movement's principle of expressing functions came the impulse, in many cases, to house the components of a administrative building in an assemblage of separate forms. Not only were the legislative halls given their own separate enclosures, but the offices that had become ever larger parts of civic buildings were given the dominant vertical forms typical of office buildings. By choosing and analyzing the components of typical administrative buildings of various historical periods, it can be seen that the combination of components has been developed simultaneously with history (Figure 56).

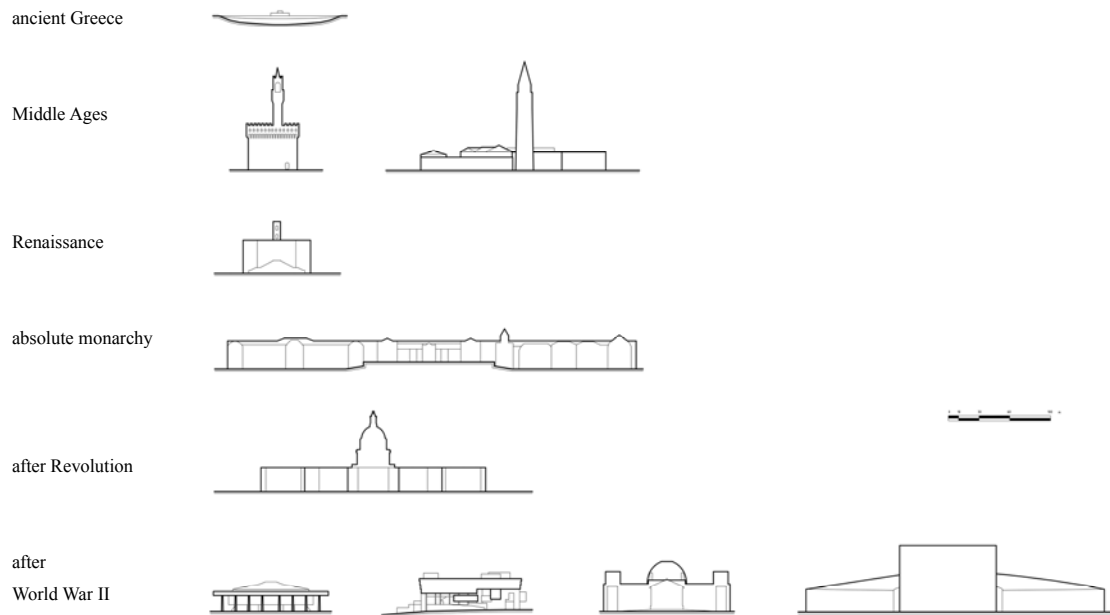


Figure 56 History correspondence of components combination
by Tao Yang

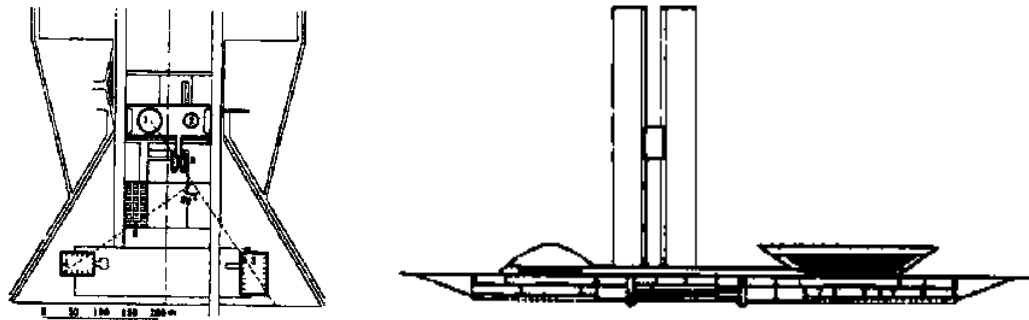


Figure 57 National Congress Complex, Brasilia

Huanjia Wu, *The Famous Works of Western Architecture in the 20th Century* (Zhengzhou: Henan Science and Technology Press, 1996), 22.

The National Congress complex at the new capital city of Brasilia, designed by Oscar Niemeyer in 1958, is a textbook example of giving each each component of the civic building its own visible form. Niemeyer had been on the international panel of architects that shaped the United Nations Headquarters in New York, and he originated its scheme of a tall Secretariat slab rising above a sculptural General Assembly and other low wings. Given the opportunity to design a national legislature on his own at Brasilia, Niemeyer expressed the same principle of separate

components even more clearly. Marking the complex on the skyline is a pair of administrative office slabs, closely spaced and joined by a small bridge. At their base is a vast horizontal slab for the legislative branches, topped by a shallow dome for the smaller chamber and a dramatic, bowl-shaped inverted dome for the larger chamber (Figure 57).

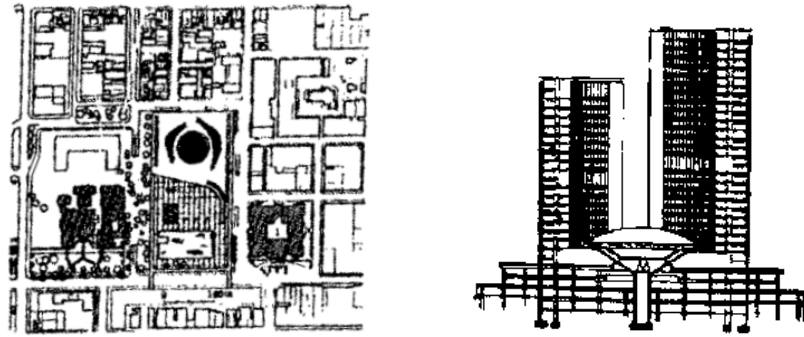


Figure 58 Toronto City Hall

Huanjia Wu, *The Famous Works of Western Architecture in the 20th Century* (Zhengzhou: Henan Science and Technology Press, 1996), 26.

While Viljo Revell's Toronto City Hall also juxtaposes separate building forms, the curves of the two towers and central meeting room make them more mutually dependent, implying a unified composition rather than a set of independent forms (Figure 58).

4.4.1.3 Contradiction between Symbolism and Function

The relationship of symbolism and function like yin and yang, in its interdependent shapes, there is the paradox of the design of administrative building. There is the administrative building as symbol of government and community—an arena where the architect has the chance to interpret a city's image. And there is the more everyday administrative building where one gets a marriage license or pays a traffic ticket, often a tangle of bureaucracy that begs for coherent resolution. Both demand a response from the architect; they must be co-equal in design.

Along these lines, there's a great quote from Vitruvius in which the ancient architect discusses how the placement of columns in a building depends on how the building is to be used.

If they are spaced too closely, he says, “when the matrons mount the steps for public prayer or thanksgiving, they cannot pass through the intercolumniations with their arms about one another, but must form a single file.”⁴⁰ This kind of close focus on how a building will be used is crucial to the success of administrative buildings. Symbol and function are neutral terms that do not necessarily portray democracy. It is in the feeling of a building, in the creation of a sense of possibility, where democracy can find its expression.

4.4.2 Design Patterns Influenced by Different Parliamentary Systems





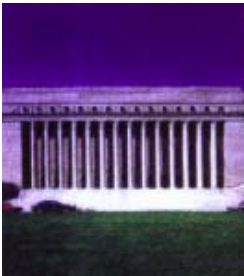

As an important administrative buildings category, the Parliament building design will inevitably be affected by the political system. In the West, there are two parliamentary systems: a unicameral parliament, as that is only a single legislative body. Denmark, Greece, Finland and other countries have adopted such a system; Correspondingly, a bicameral parliamentary system is a kind of both Houses of Congress composed of independent operation, as the legislative body of the political system. Bicameral originated in the Roman Republic. British-style bicameral system is derived from the early days of the British Parliament, the interests of the nobility and the civilian population can not be balanced, so the House of Lords by the nobles and the House of Commons by civilians were established to checks and balances. American-style bicameral system is derived from the United States, the United States is federal states composed, every state has its own origin and cultural and ethnic groups, in order to avoid the states with a large population against the interests of small population states, so the Senate was established, regardless of their population, every state has two representatives; while the proportion of the population assigned to the House of Representatives.











German photographer Jorg Hempel has taken a lot of photos for most of the European Parliament building, including internal settings and external image. The Series of photographs of

⁴⁰ Cited by American architect Thomas Gordon Smith in ‘Eternal Architecture’, *Archaeology Odyssey*, May-June 2000, p.50.

Parliament Hall he shot are a good illustration of the different architectural styles of unicameral parliament and bicameral parliament. In the following table, with photographs and political system background of the country, different modes of architectural design under the parliamentary system were summarized:

Table 4.2 Correspondence between architectural design patterns and parliamentary system

Building/ City/ Time	Building Exterior Image	Parliament Hall Interior	Country/ Parliamentary System
Belgian Parliament (Brussels) 1779-1783			Belgium Bicameral
Danish Parliament (Copenhagen) 1733-1740			Denmark Unicameral
Finnish Parliament (Helsinki) 1931			Finland Unicameral

<p>Palace of Westminster (London) 1836-1870</p>			<p>Britain Bicameral</p>
<p>Greek Parliament (Athens) 1842</p>			<p>Greece Unicameral</p>
<p>Irish Congress (Dublin) 1745-1748</p>			<p>Ireland Bicameral</p>
<p>Spanish Parliament (Madrid) 1843-1850</p>			<p>Spain Bicameral</p>
<p>Swedish Parliament (Stockholm) 1894-1906 年</p>			<p>Sweden Unicameral</p>

Source: Deyan Sudjic and Helen Jones, *Architecture and Democracy* (London: Laurence King Publishing, 2001)

Edited by Tao Yang

Through the above analysis it can be found: to some extent, different parliamentary systems in different countries can be reflected through its parliament building. Bicameral Capitols are generally divided into two wings of the House of Lords and the House of Commons, various parts belonging to a whole, with a central dome or other landmark structures ensuring its overall unity. Bicameral parliamentary system is generally reflected through a rectangular parliament hall, which is characterized by opposite stepped seats. Other unicameral Parliament buildings (or both houses set up in separate buildings), usually have a semicircular parliament hall.

4.4.3 Design Patterns Influenced by Regional Culture

The design of an administrative building has usually been strongly conditioned by the desire of the government to reinforce the image of a place—whether nation, state, or locality. The image to be affirmed is typically a mythologized version of the existing architectural tradition of the area or the tradition that government leaders want to adopt. London's Houses of Parliament, for instance, elaborates on a past English Gothic architectural tradition; the US Capitol in Washington takes on the Classical form then being adopted by the new nation to associate it with the Roman republic. From the twentieth century, a couple of examples illustrate the point. The regional culture of administrative building can be manifested in many aspects as form, material, detail, combination, etc. As design patterns, it can be summarized into the following three categories:

4.4.3.1 Developing Local Architectural Tradition

In 1916, Carl Sandburg called Chicago the “city of the big shoulders”. Known for four-square, no-nonsense structures, Chicago was fortunate to become the home of the architect Mies van der Rohe and several highly capable firms that based their design on his principles. The

Chicago Civic Center built in 1964 is an undiluted embodiment of the image Chicago's political and cultural leaders wanted to project to the world. Built primarily as a courthouse, the building dispenses with any vestige of the grand portal or other traditional formal gestures expected of courthouses. Because its courtrooms require high ceilings, every story of the building has been made exceptionally tall, magnifying the structure's scale accordingly. The view approaching it sees familiar architectural features of Chicago's office buildings—repetitive structural bays and wall modules, walls rising vertically from a flat plaza to a flat roof—but realizes the building is at the scale of giants. Exterior surfaces of oxidizing steel add to its apparent brawniness.(Figure 59)



Figure 59 Chicago Civic Center



Figure 60 Santa Barbara County Courthouse

C. W. Fentress and Robert Campbell, *Civic Builders*
(Chichester; New York: Wiley-Academy, 2002).

The city of Santa Barbara, California, wanted to project an image vastly different from Chicago's. The city is established by Spanish missionaries before the United States won its independence, the county courthouse of 1929 was designed to underscore the exotic heritage of the place. Its irregular form suggested the relaxed, informal lifestyle Southern California was promoting to the world. The center of the building is actually a landscaped court, a much-expanded version of the mission cloisters and domestic patios then being reproduced all over the area. The building's prominent, over-scaled archway leads from the street into this garden. (Figure 60)

4.4.3.2 Using Architectural Symbols

“Symbol is the image of expression of ideas and concepts, including including a variety ways that people can feel, shape, sound, color, taste, smell, etc.” As a spatial modeling and form art, architecture itself is a symbol phenomenon, which can express thoughts, feelings, meaning from the very beginning. As a special building type, the administrative building has specific requirements for symbolic expression, symbols are widely used in the design of administrative buildings (especially post-modernist style administrative buildings). The Portland Public Services Building is an example of this design pattern (Figure 61). Located on a 200-foot square downtown block, the building houses the city’s municipal offices. This site is flanked by city hall and the county courthouse on two sides, with the public transit mall and a park on the other two sides. The building form is the most economical chunky shape, carefully refined classical symbols as garlands, pilasters, keystone are used in the facade; the columns are tied together and embellished by garlands; white concrete, tinted windows and other modernist abstract symbols link the new and the old Portland. This mixture of post-modern style lets different people experience the architecture, breaking the consistently single, serious and depressing image of administrative building.



Figure 61 Portland Public Services Building



Figure 62 Capitol for the Province of Toulouse

C. W. Fentress and Robert Campbell, *Civic Builders*
(Chichester; New York: Wiley-Academy, 2002).

Another example is the capitol building for the province of Toulouse in southern France (Figure 62). The design tries to use symbols to refer to historical themes without attempting to reproduce them. At the entrance to the complex, stone and brick banding suggests a grand doorway in a simple brick wall. Before this gateway rise two-dimensional representations of ancient monumental columns once located beside the site.

4.4.3.3 Representing Natural Landscape

Using local natural landscape as symbolism (in the absence of a rich historical past, or with a unique natural landscape), is another possible design pattern.

In hosting a national competition in 1992 to design a county government complex in Las Vegas, officials and citizens alike made it clear that they didn't want the glamour of the casino side of the city. Instead, they hoped for a building with dignity and an element of solitude, a structure with a strong sense of place and somewhere they could gather as a community of citizens. "Fentress Bradburn drew on the imagery of the desert, and won the competition."⁴¹ The architects fixed on the canyon's sense of enclosure. This canyon 'room' is to the desert what the town square is to the city: a ceremonial space to gather and to take refuge. The enfolding shape of the building emulates the sinuous curve of the desert wash but it is also a welcoming form symbolic of open and accessible government. The government center acts as the backdrop and support to the community, just as canyon walls act as a backdrop and form-giver in the desert. Organized around a circular courtyard, the four buildings of the complex include a six-story county administration building and three one-story buildings for the county commissioner's chambers, a multi-purpose community facility and a central plant. Images from the desert pervade the design. Columns emulate the stone "pillars" created by wind and water erosion; the pyramid commons hall references Lone Mountain near Las Vegas; and the approach wall is carved with petroglyphs and punctuated with irregular openings, like a canyon wall (Figure 63).

⁴¹ C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 121.



Figure 63 Clark County Government Center



Figure 64 Rotunda Interior

C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002).

The rotunda is a dark, shaded space in the desert sun. “More desert imagery imbues this space: blue granite signifying water; dark green balconies representing pockets of vegetation; and tiny wall openings and the sculpted shade of the skylight, which emulate the crevices in stone formations. Even the light fixtures are shaped like flowering desert plants.”⁴² The circular courtyard with a central stage and a sloped lawn amphitheater is a performance space, . “The courtyard is the one irrigated zone of lawn within the complex. Visually and physically accessible to all, the lawn bowl represents a careful, efficient and ultimately symbolic use of that most precious of desert resources, water.”⁴² (Figure 64)

4.5 Summary

The design patterns of Western administrative architecture can be divided into following three levels: macro level—three types of building location of administrative building in the city; meso level—four forms of square space; micro level—the architectural design influenced by three main factors. In which three design patterns can be summarized at macro level: geographic prominent position, city center and public building complex on the edge of the city or in new city. At meso level, the design patterns are: multifunctional enclosed square, ceremonial square, interior square and pass-through administrative building. The main factors of design patterns at micro level are: symbolism, parliamentary system and regional culture. By

⁴² C. W. Fentress and Robert Campbell, *Civic Builders* (Chichester; New York: Wiley-Academy, 2002), 121.

understanding the basic guidelines and the common parts, the design patterns summarized in this thesis are the basic ones at different levels. The purpose is to construct an open frame for the design and research of administrative building.

Chapter 5 | Current Issues of Administrative Buildings in China

5.1 Role of Administrative Buildings in Urban Space

5.1.1 Yamen in Feudal China

A yamen (衙门) is any local bureaucrat's, or mandarin's, office and residence of the Chinese Empire. Within the yamen, the bureaucrat administered the government business of the town or region. Typical responsibilities of the bureaucrat includes local finance, capital works, judging of civil and criminal cases, and issuing decrees and policies.

The site selection of Yamen was one of the most important issues in the construction of cities. In the Chinese feudal society, the layout of cities was deeply influenced by Confucian hierarchy. The concept of “center” was the main idea of palaces and yamens. In the layout of cities throughout different dynasties, yamens were mostly located in the center (Figure 65, 66).

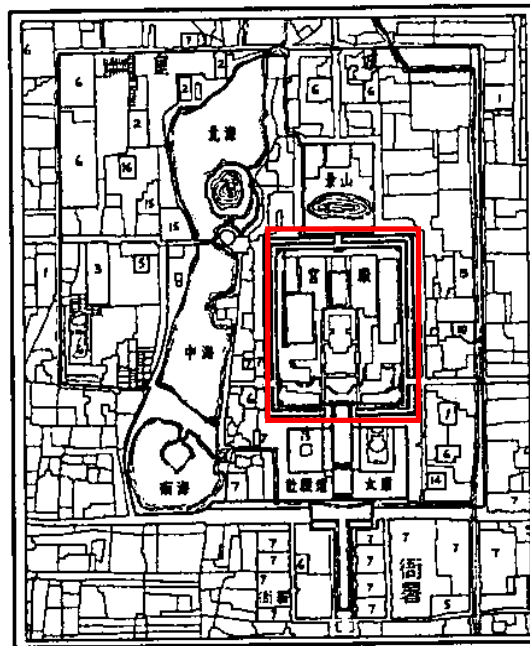


Figure 65 Plan of Beijing in Qing Dynasty (Qianlong Reign)

Liu Dunzhen, *History of Ancient Chinese Architecture*
(Beijing: China Architecture & Building Press, 1984), 290.

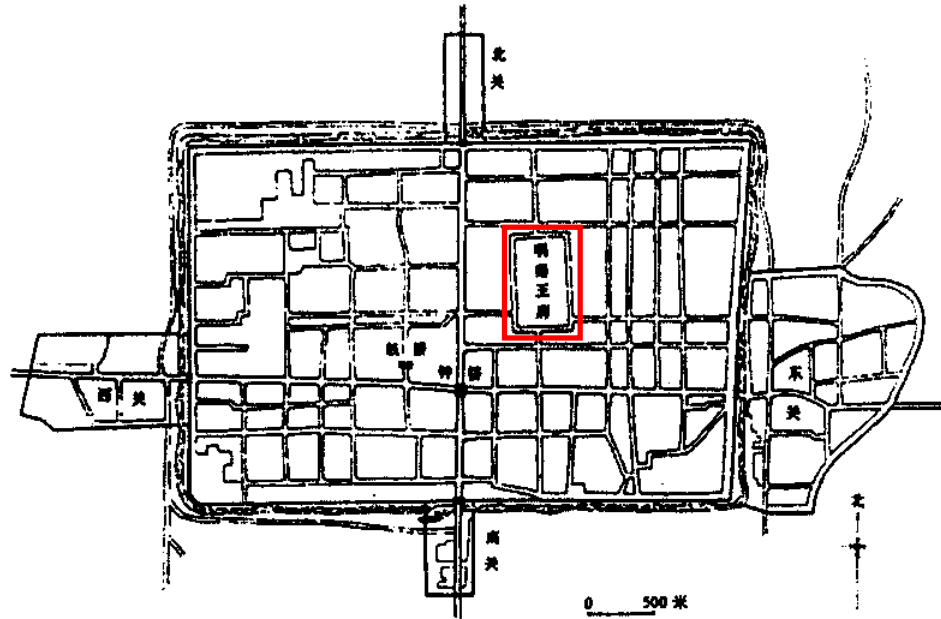


Figure 66 Plan of Xian in Ming and Qing Dynasty

Niu Shujie, “Study on the Architectural Hierarchy System of YASHU Buildings During the Ming and the Qing Dynasties” (Master diss., Xi’an University of Architecture and Technology, 2003).

The site of yamens was the best according to fengshui. In addition, due to the value of hierarchy, the rich and dignitaries all tried to seek an official career, so they chose to live in the area around palaces or yamens which were in the center of cities, for themselves or for their future generations. The area around yamens was occupied by the local dignitaries’ manors, and became thriving centers of cities due to the good business conditions. The overall arrangement of yamens and imperial palaces in cities were similar.

Yamen varied greatly in size depending on the level of government they administered, and the seniority of the bureaucrat's office. However, the grade and the type of yamen buildings should be in strict compliance with rules developed by feudal ruling class. The structure of local yamens was influenced by the structure of imperial palaces, for example the Forbidden City in Beijing. The yamen at a local level typically had similar features: a front gate, a courtyard and a hall (typically serving as a court of law); offices, prison cells and store rooms; and residences for the bureaucrat, his family and his staff (Figure 67, 68, 69).

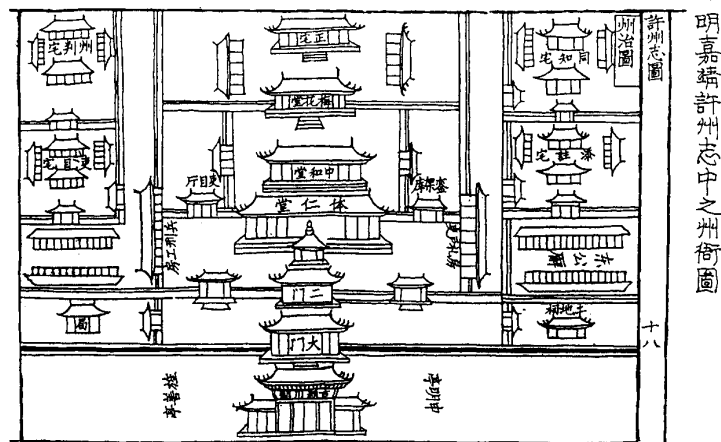


Figure 67 Plan of Xuzhou State Yamen in Jiaping Reign, Ming Dynasty

Niu Shujie, “Study on the Architectural Hierarchy System of YASHU Buildings During the Ming and the Qing Dynasties” (Master diss., Xi’an University of Architecture and Technology, 2003).

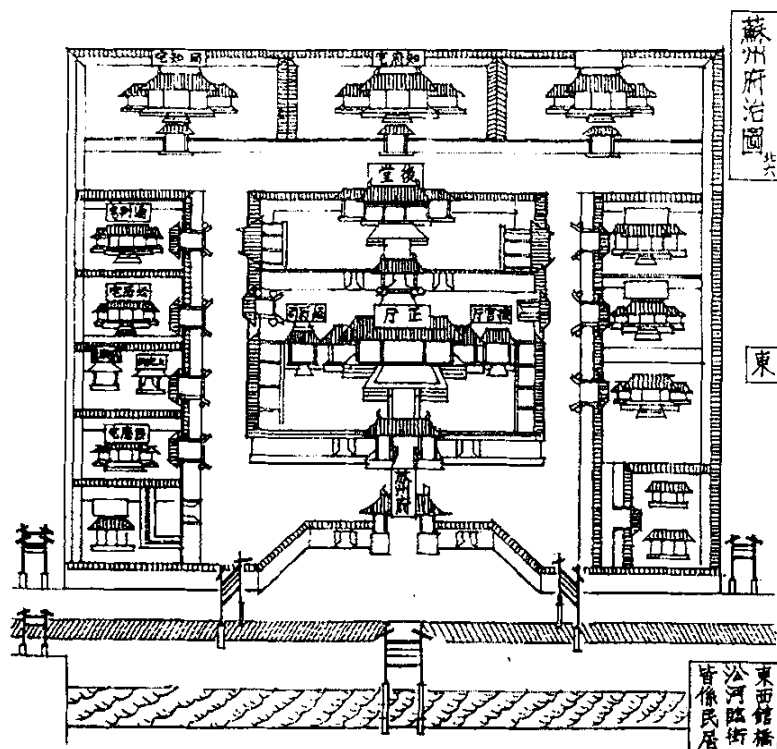


Figure 68 Plan of Suzhou Prefecture Yamen in Hongwu Reign, Ming Dynasty

Niu Shujie, “Study on the Architectural Hierarchy System of YASHU Buildings During the Ming and the Qing Dynasties” (Master diss., Xi’an University of Architecture and Technology, 2003).

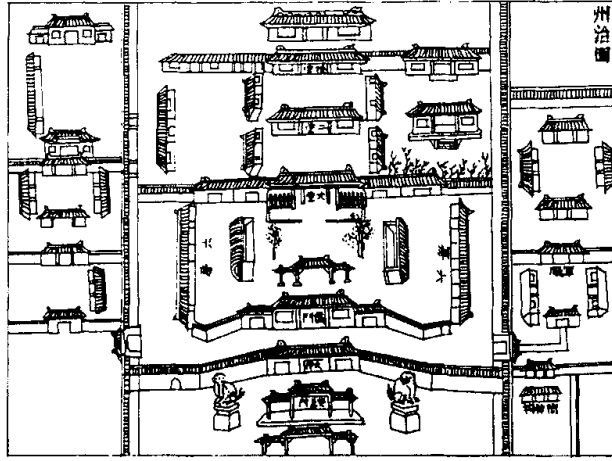


Figure 69 Plan of Zhengzhou State Yamen in Qianlong Reign, Qing Dynasty

Niu Shujie, “Study on the Architectural Hierarchy System of YASHU Buildings During the Ming and the Qing Dynasties” (Master diss., Xi’an University of Architecture and Technology, 2003).

5.1.2 Administrative Center in Today’s China

Due to the rapid urbanization in China, existing facilities can’t meet the needs of developing cities, and cities require expansion. After the reform in land and housing policy, local governments are able to promote the growth of GDP by selling the right of land use, and at the same time local governments get the land to build administrative centers. After the tax sharing system reform in 1994, local governments are able to independently control part of the revenue, gaining the economic capacity to build administrative centers; After entering WTO, local governments at various levels try to attract investment by all means, hoping to create a good image of the city by architecture. Administrative centers, as the building type closely related to the image of the government, become the first priority. In addition, local governments have the demand to improve the working environment. Above all these reasons, local governments at various levels start to build a large number of administrative centers.

There are two kinds of site for new administrative centers: one is within built-up areas, and the other is outside built-up areas. In recent years, sites outside built-up areas have become the mainstream of construction. In order to catch the “express” of economic globalization, many

cities accelerate the expansion of the city, carrying out new town construction. In the beginning of new town construction, newly built areas often lack of life. Governments try different methods including building administrative centers in new areas to adjust overall city plans, hoping to promote the development of supporting facilities and to gather popularity. However, besides some rapidly developing coastal cities, there are problems, to a certain extent, in the new town construction in some areas of China. Without rational planning and design, some new town development driven by administrative centers continues in a short term, but as time goes by, new towns become ghost towns without enough resident population's support.

In the construction of administrative centers, local government, party committee, NPC (National People's Congress) and CPPCC (Chinese People's Political Consultative Committee) are always arranged together. This mode of construction follows the principle of efficient, land-saving and energy saving. However, too centralized constructions sometimes lead to negative tendencies: for example, it is difficult to control the expansion of scale, and some administrative centers become self-enclosed and self-contained.

As the economy and the population grows, Chinese cities are facing the practical difficulties—the lack of space in old government office buildings and existing administrative building can not meeting the functions of modern administrative building because of its old age. Besides removing the old administrative building then re-planning and constructing in new urban areas, Chinese cities perhaps can learn new possible ways from contemporary Western administrative buildings: for example addition or conversion on the original building and using eco-technologies in the conversion process. However, in the construction of new city or new city area, it can be predicted that administrative building will develop in centralized model as public building complex. Unlike in the old city government office buildings scattered around the city, the centralized model can greatly improve efficiency and convenience of access. Meanwhile, the requirements of multi-function should be taken into account in the overall design of administrative building and public building complex.

5.2 Needs of New Design Strategies

5.2.1 Need for Appropriate Scale

In recent years, with the fast economy growth and urbanization, there is a trend of expansion of the scale of administrative buildings at municipal level. The hierarchy of city in China can be divided into administrative hierarchy and scale hierarchy. According to the administrative hierarchy, China's cities can be categorized as three types: municipality, prefecture-level city, county-level city, and according to the scale hierarchy, they can be categorized as extra large city, large city, medium-sized city and small city. The following table is the scale of new administration centers in the new districts of cities in Zhejiang Province.

Table 5.1 Scale of new administration centers in the new districts of cities in Zhejiang Province

City		Xiangshan	Jinhua	Yongkang	Tiantai	Leqing
Current Scale	Population	111,500	400,000	85,000	77,600	237,700
	Area (ha.)	850	4,200	897.7	641	1,907
Planning Scale	Population	220,000	950,000	220,000	200,000	480,000
	Area (ha.)	2,200	10,000	2,156	1,920	4,567.7
Scale of New Administration Center	Parcel Area (ha.)	12	3.37	0.3	5	10
	Building Floor Area (sq.m.)	80,000	20,000	--	20,000	--
	Square Area (sq.m.)	30,000	--	--	40,000	40,000

Data Source: Ma Xiang, "Reflect on the Design of Administration Center in Medium and Small Cities" (Master diss., Zhejiang University, 2002).

Edited by Tao Yang

From the statistics in the table, It is hard to find a connection between the scale of new administration center and the scale of the city. It is not rare that a city at lower-level city has a larger-scale administrative building than a city at higher-level. This shows, from one aspect, that

the scale of newly built administrative buildings is not based on the rational analysis of the status of the city, but with subjectivity and arbitrariness. A standard for the appropriate scale of administrative buildings is needed.

What can be found from the study of Western administrative building is that administrative building, as important physical entities for the functioning of government agencies, its form is closely related to the political types and the hierarchy of each city. For China, the hierarchy of city is primarily subject to the country's fundamental political system: unlike Western parliamentary systems generally with a comparatively high degree of autonomy, the mainland China implements the political system of socialist public ownership and people's democratic dictatorship. In this case it is necessary for administrative buildings in different cities to have its own construction and design patterns appropriate for the size of the city.

5.2.2 Need for Public Presence

Pu Miao stated that "the 19th-century Chinese cities did not have much consciously planned public space, especially the nodal types such as square and park. People simply used the streets, or whatever left by the traffic flow. The urban renewals brought by the Economic Reform since 1978 have changed Chinese cities completely."⁴³ The square of administrative buildings are typical examples of "window-dressing" projects to show off the governments' accomplishment and authority.

China has entered such a historical moment that the public, government officials and professional analysts have agreed that a fundamental reform in its political and social structure cannot be delayed because its successful economic development can no longer work with the other aspects of the society. It is time to accelerate the process of political democratization and of increasing civil liberties. What is more appropriate than creating adequate public spaces for the

⁴³ Pu Miao, "Public Space, High Density, and an Emerging Civil Society," *Urban Design* (UK, Summer/2013).

purpose? Administrative buildings, as the image of the city, could be further developed with more public presence to be an example of the civil society.

By the flexible using for reference and application of four forms of square of the design patterns of Western administrative building, the blind fervor for “big” in the design of administrative buildings may be avoided—for example the idea of that administrative build must be accompanied with “landscape avenue” or “city square”, emphasizing geometric patterns in the layout, etc. In the appendix, there are significant differences in scale between different administrative buildings and their exterior spaces. Therefore, the appropriate human scale of space in the design is very important to bring in public presence.

5.2.3 Need for Identity

From north to south, from east to west, numbers of administrative buildings all over China seem like “cookie-cutter” designs. Grand, colossal, monolithic, symmetrical have become the same mode for those administrative buildings. Identities are lacking in those faceless buildings.

Taking the administrative buildings in the following figures as examples, those buildings are located in different regions of China (Figure 70). However, architectural form of these buildings is surprisingly similar: strict symmetry, closed spacial layout, tall and long building shape and large scale, making people able to recognize them as administrative buildings at first sight. Administrative buildings share typical functions, but the ubiquitous and iconic building image has inevitably become monotonous and boring. The excessive pursuit of a solemn image, the over-emphasis on the authority of government and buildings’ control of the square and the surrounding area led to a nationwide monotonous architectural vocabulary.

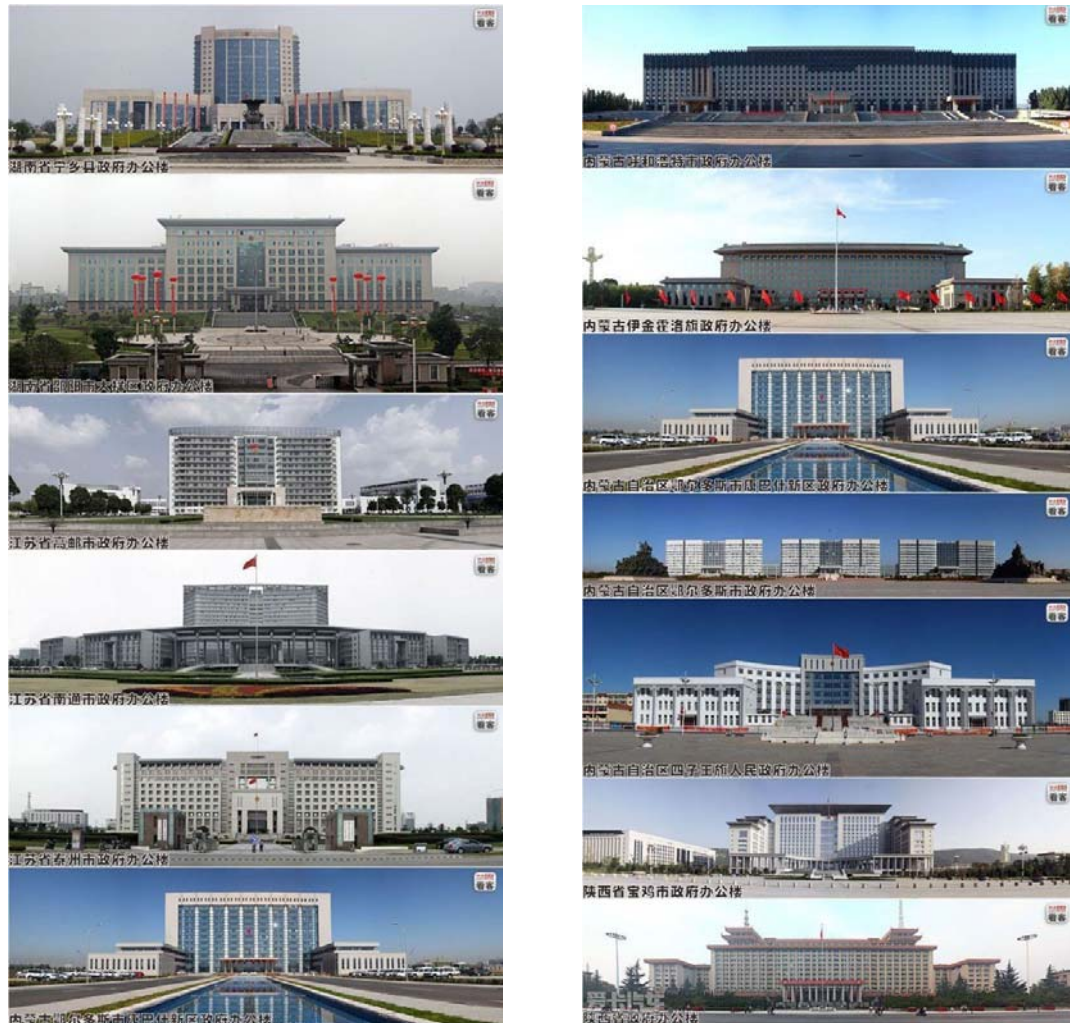


Figure 70 Administrative buildings in different cities in China

Bai Xiaoci and Daniel Nieh, “Buildings for China: Aesthetics and Government Architecture,”
Art Life (2011/1): 128-137.

In a period of time, because the over-emphasis on “authority” and the relatively lack of “citizenship” in the design of China’s administrative building, the architecture was divorced from the local culture and the actual conditions of the city, lacked characteristics and features. Faceless administrative buildings were created. In the new development situation, city is facing the pressure of competition. “City image” has been raised as a hot issue, and the administrative building, as the city’s key project, inevitably becomes the so-called “image project”. Although the municipal systems of the West and China are different and there is content in the Western experience not suitable for China’s current national conditions, the values of democracy and

equality, multifunctional components, open and unique architectural image, etc. included in the contemporary Western administrative build undoubtedly imply a good reference value. How to incorporate appropriate symbolism, specific functional requirements and regional culture in the design and how to reflect characteristics of the times and the local culture are the issues that should be considered in the design of each administrative building. Only in this way can we prevent the blind pursuit of a luxury and magnificent “name card of the city”.

5.3 Summary

Combining the historical study and the analysis of the contemporary phenomenon of administrative buildings in China, we may be able to predict the future direction of development of administrative buildings in China: it will be built in a more appropriate scale, with more public presence and more cultural identities.

Chapter 6 | Vernacular Architecture and Yamen Buildings in Guizhou

6.1 Natural Conditions in Guizhou

6.1.1 Geographic Features

Guizhou Plateau is known as the “mountainous country”. About 93% of its 176,000 square kilometers of land is mountains and hills, and only about 7% is basin and valley plain. The altitude varies greatly: the province's highest point is at 2,900 meters above sea level, while the altitude of the lowest point is only 137 meters. Most of the terrain in central Guizhou terrain is at an altitude of about 1,000 meters above sea, the altitude of southeast Guizhou is between 500~800 meters, while the north and the south ranges from 500 meters to 1,000 meters.⁴⁴ (Figure 71)



Figure 71 Sketch map of the terrain of Guizhou

Luo Deqi 罗德启, *Guizhou minju 贵州民居*, (Beijing: China Architecture & Building Press, 2008), 24.

“There never were three square feet of level land”⁴² (地无三尺平) is an old saying in Guizhou that describes the extent of mountainous, and “eight mountain one water one

⁴⁴⁻⁴³ Luo Deqi 罗德启, *Guizhou minju 贵州民居*, (Beijing: China Architecture & Building Press, 2008), 24.

farmland”⁴³ (八山一水一分田) is another one indicating the approximate proportion of mountain. The gradient of mountains and hills in Guizhou is normally between 30 to 40 degrees, and mountain slope less than 15 degree is rare. This shows that Guizhou is not only mountainous, but also steep. This special topography of Guizhou makes its mountainous architecture unique. (Figure 72, 73)



Figure 72 Wangxiangyan, Fenggang County, Guizhou

Source: “凤冈望乡岩秋色,” accessed March 6, 2014,
http://www.zunyi.gov.cn/ch8000/ch8009/2010/08/03/content_2010922689.shtml.

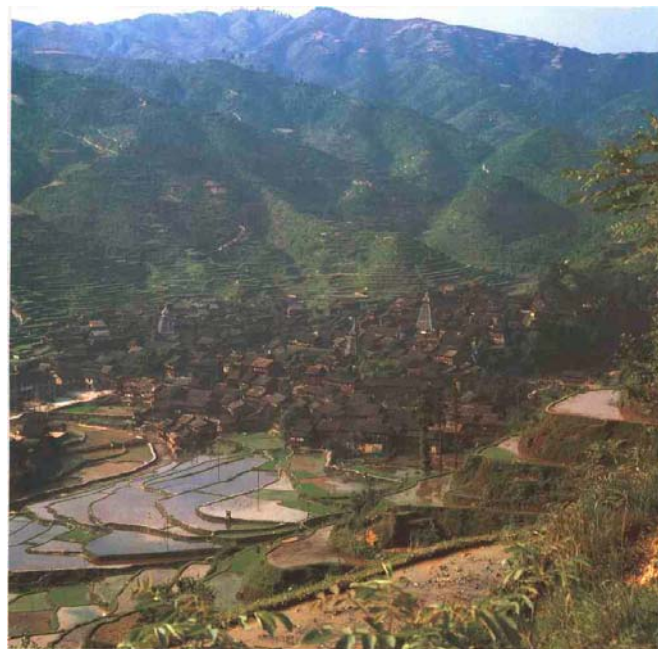


Figure 73 The full-view of the Dong nationality stockaded village in Gaozeng, Congjiang County
Guizhou Cultural Relics Management Committee, edit, *Ancient Guizhou Architecture*,
(Guiyang: Guizhou Art Publishing House, 1987), 74.

Geology research results can not only explain the causes of natural beauty in Guizhou, but also explain the ethnic and cultural characteristics. In southeast Guizhou, the geological characteristics of clastic rock is conducive to the growth of tall trees. Hence cedar has become an important material for the Hmong people and the Dong people who live in this area, creating the stilt house architecture and cultural characteristics such as covered bridge and wood raft (Figure 74). However, in western and central Guizhou, limestone with various thickness, moderate hardness and uniformly dense is ease for mining and processing, resulting slate as an excellent material for stone buildings (Figure 75).

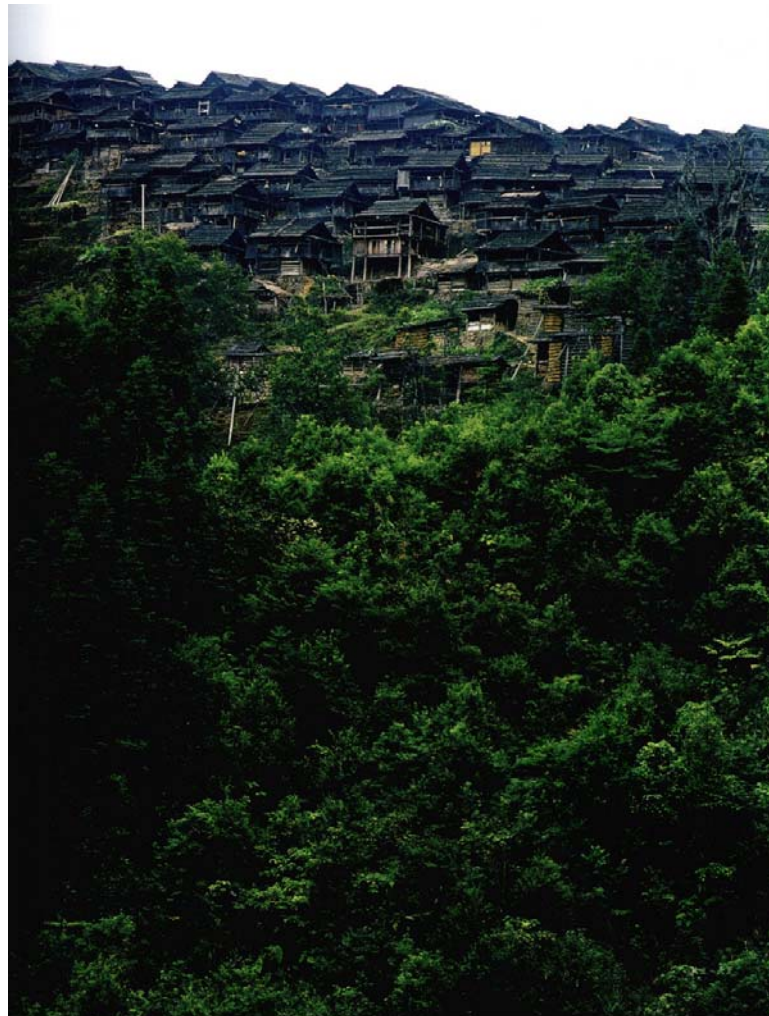


Figure 74 Stilt house in the forest, Congjiang, Dadai
Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 34-35.

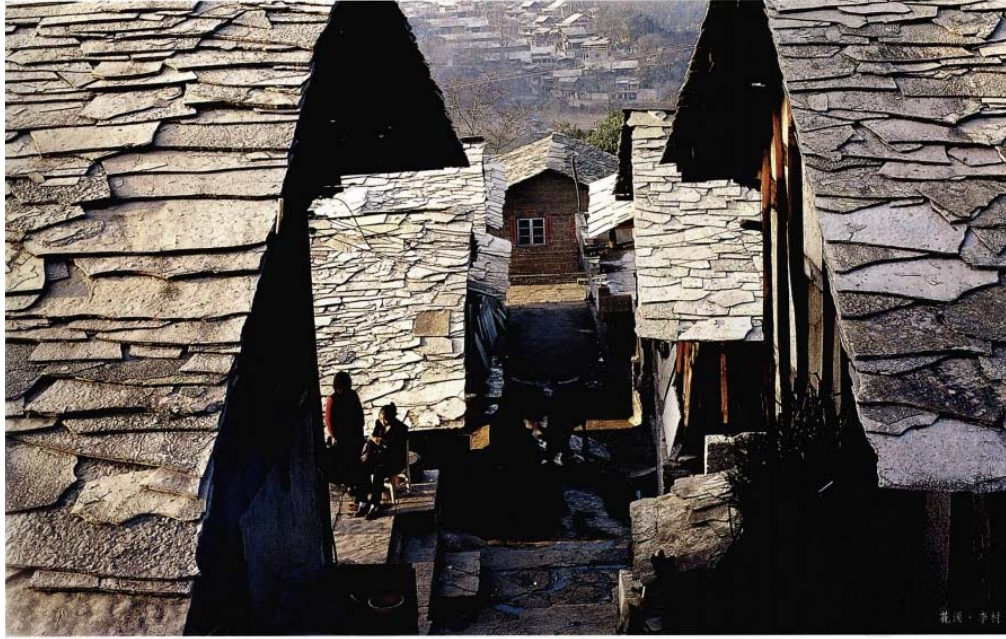


Figure 75 Bouyei stilt house, Huaxi, Licun

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 129.

It can be seen that the vernacular architecture in Guizhou is subject to the mountainous terrain but has developed its unique styles. Mountains and hills have created flexible layout, beautiful environment and various building materials for the vernacular architecture. So, mountains and hills bring the identity to the vernacular architecture in Guizhou among various architecture in China.

6.1.2 Climatic Features

Talking about the climate in Guizhou, “there never were three sunny days in a row”⁴⁵ (天无三日晴) is most Chinese people’s first impression. In fact, the climate in Guizhou is not that bad. Most areas in Guizhou have four distinct seasons, mild climate and abundant rainfall.

⁴⁵ Luo Deqi 罗德启, *Guizhou minju 贵州民居*, (Beijing: China Architecture & Building Press, 2008), 25.



Figure 76 Map showing the location of Guizhou Province

Source: “Guizhou in China,” accessed March 10, 2014,
[http://en.wikipedia.org/wiki/File:Guizhou_in_China_\(%2Ball_claims_hatched\).svg](http://en.wikipedia.org/wiki/File:Guizhou_in_China_(%2Ball_claims_hatched).svg)

Guizhou is a typical subtropical moist monsoon climate. Because of its high altitude, low latitude and the effect of southeast monsoon, it has warm and humid climate with abundant rainfall (Figure 76). “The average annual temperature is around 15 degrees centigrade, and the average temperature of hottest July is between 22 and 25 degrees centigrade while the average temperature of coldest January is mostly more than 5 degrees centigrade. The annual rainfall in most areas of the province is 1,200 mm. The annual average relative humidity is around 80%. The annual sunshine duration is between 1,200 hours and 1,800 hours, and the percentage of sunshine is between 30% and 40%. The annual average wind speed is between 1 meters and 3 meters per second.”⁴⁶ Unlike other areas in China, there is no dust storm in spring, no typhoon in autumn, no severe cold in winter and no intense heat in summer. Due to the wide range of altitude, there is still difference between architecture affected by climate in different parts of Guizhou. However, in general, the climate in Guizhou provides conditions for the open layout of its architecture.

⁴⁶ Luo Deqi 罗德启, *Guizhou minju* 贵州民居, (Beijing: China Architecture & Building Press, 2008), 26.

6.2 Ethnic Groups & Vernacular Architecture Types

Guizhou is demographically one of China's most diverse provinces. Minority groups account for more than 37% of the population and they include Miao (including Gha-Mu and A-Hmao), Yao, Yi, Qiang, Dong, Zhuang, Bouyei, Bai, Tujia, Gelao and Sui. 55.5% of the province area is designated as autonomous regions for ethnic minorities.⁴⁷ (In China, the term “ethnic minority” refers to any ethnic groups besides the Han Chinese.)

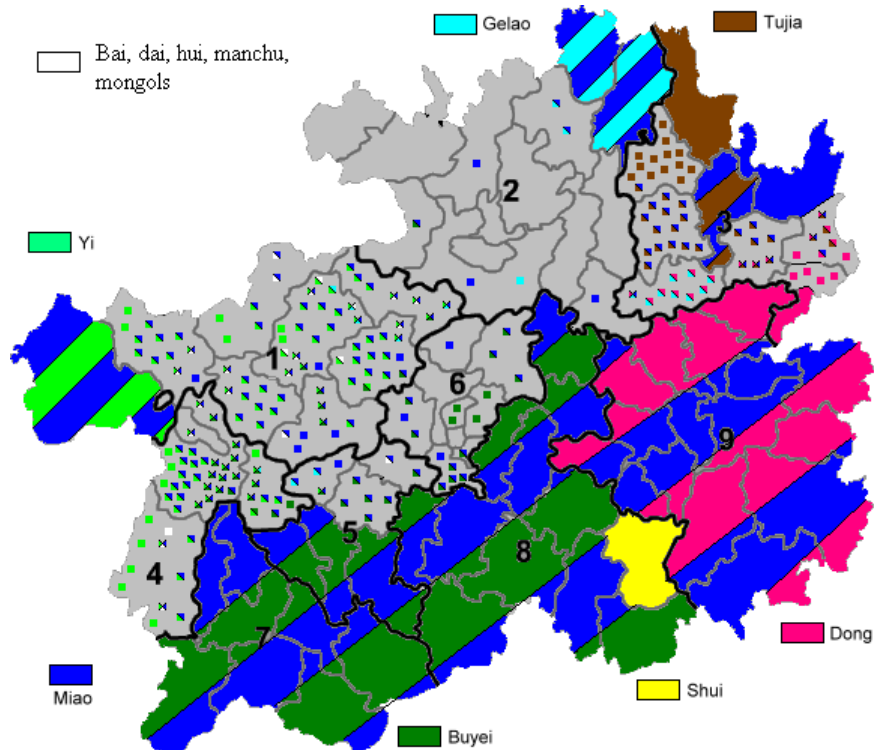


Figure 77 Major autonomous areas within Guizhou

Source: “Ethnic minorities areas in Guizhou,” accessed March 10, 2014, http://en.wikipedia.org/wiki/File:Ethnic_minorities_areas_in_Guizhou.png

The geographical environment in Guizhou, and the “large dispersion, small settlements” characteristics of ethnic groups determine the complexity of its vernacular architecture (Figure 77). Vernacular architectures differ greatly, even the architecture of the same ethnic group has different kind of characteristics in different regions. For example, the vernacular

⁴⁷ “Fifth National Population Census of the People's Republic of China, Table 1-6: Population of provinces, autonomous regions, and municipalities by ethnicity,” National Bureau of Statistics of China, accessed March 8, 2014, <http://www.stats.gov.cn/tjsj/ndsj/renkoupuocha/2000puocha/html/t0106.htm>.

architecture of Bouyei in central Guizhou uses stones for wall and slates for roof, while it uses bricks for wall and tiles for roof in southwest Guizhou. However, in general, the vernacular architectures in Guizhou can be divided into two categories: stilt house which is common among ethnic minorities, and courtyard house which is the paradigm of Han Chinese vernacular architecture.

6.2.1 Vernacular Architecture of Ethnic Minorities: Stilt House

Different ethnic minorities in Guizhou have developed their own vernacular architecture, but in general, they all have the following features in site selection, space system, layout, architectural style and construction technique:

(1) Combining settlements with the natural is emphasized in site selection. Settlements are mostly located in tree-shaded places beside beautiful mountains and rivers, whether in the mountains or on the flat land. (Figure 78)



Figure 78 Dong Village, Liping, Dimen

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 110-111.

(2) Houses follow the contours, developing the spatial characteristics of settlement of being scattered high and low over the mountain with strong cohesion.

(3) Buildings are mostly stilt house, which are skillfully integrated with mountain

slopes. The layout of building groups is flexible: it can be developed horizontally on the flat land, or constructed vertically following the mountain. Building spaces are expended by the form of stilt house. (Figure 79)



Figure 79 Singe-bay stilt house

Luo Deqi 罗德启, *Guizhou minju 贵州民居*, (Beijing: China Architecture & Building Press, 2008), 116.

(4) Construction techniques are inherited by word of mouth. The architectural style is pristine and rustic, and the building structure is simple and applicable with the use of local materials. A rich tradition of architecture has been formed and kept to this day. (Figure 80, 81)



Figure 80 Construction process of Dong stilt House, Congjiang, Gazoeng County
 Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 100.

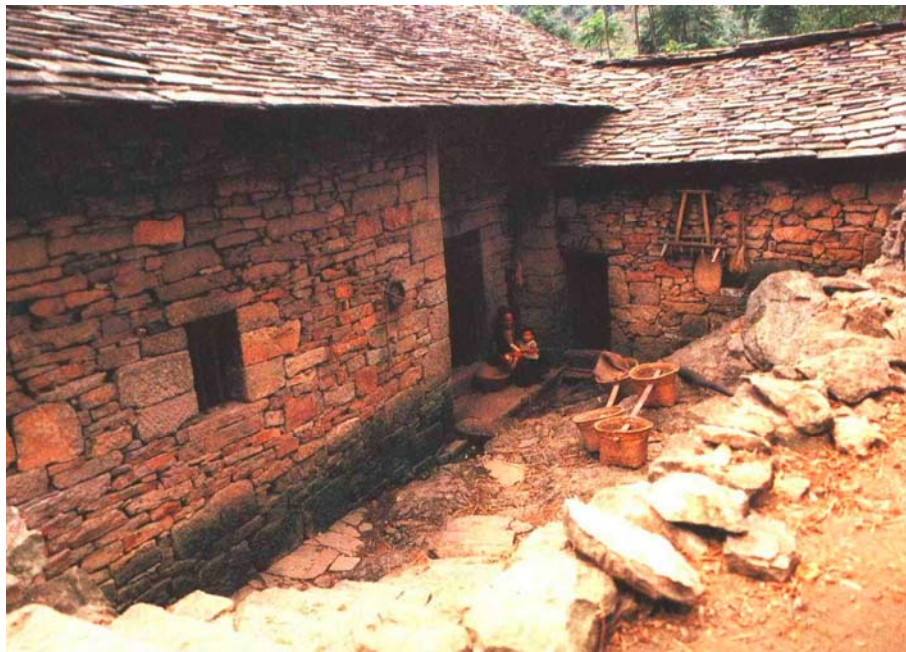


Figure 81 The resident of the Bouyei, Huashishao, Guanling County
 Guizhou Cultural Relics Management Committee, edit, *Ancient Guizhou Architecture*,
 (Guiyang: Guizhou Art Publishing House, 1987), 73.

(5) The ideology of architecture is relatively primitive when compared to the vernacular architecture of Han Chinese, which reflects the strict hierarchy. The main principle of vernacular architecture of ethnic minorities in Guizhou is applicability: to adapt to the natural environment and to meet the everyday needs. No courtyard architecture type has emerged. The structure of settlements is simple. Buildings with primitive symbolic meaning are usually built as the centers of settlements, such as drum tower and mountain song ground (歌坪). (Figure 82)



Figure 82 Center of Dong settlement, Congjiang, Yintan

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 78-79.

6.2.2 Vernacular Architecture of Han Chinese: Courtyard House

In today's China, the term "ethnic minority" refers the ethnic groups besides the Han Chinese, but actually the "ethnic minority" was Han Chinese in the history of Guizhou. This state had not changed much at least from before the Ming Dynasty. After Ming Dynasty, the central government moved large numbers of Han immigrants to strengthen its control of Guizhou area. Among these Han immigrants, a typical example is the Tunbao people. The Tunbao are an

officially unrecognized ethnic group of Guizhou province, China.⁴⁸ The Tunbao are descended from ethnic Han people who were part of an army sent on an expedition to Guizhou during the Hongwu reign of the Ming Dynasty (1368 - 1644). The Tunbao have preserved much of their culture and architecture from the Ming era (Figure 83).



Figure 83 Tunbao village, Anshun, Benzhai

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 184-185.

The Han immigrants and local indigenous groups were influenced by each other, especially the architecture of Han Chinese, which has been changed to adapt to natural and geographical conditions in Guizhou. Unique vernacular architecture of Han Chinese has been created, sharing following features:

(1) The distribution of settlements is closely related to military strategy or migration routes or trade routes. Settlements were usually built along ancient post roads or ancient waterways with convenient transportation. The site selection, the construction and the layout of houses are all affected by the patriarchal clan system and Feng-shui theory. Houses are usually

⁴⁸ James Stuart Olson, *An Ethnohistorical Dictionary of China* (Westport: Greenwood Publishing Group, 1998), 340.

located on small plains between mountains or hillside fields or river banks. The space and street system of settlements is typical mountain style. Buildings located on the hillside are integrated masterly with natural terrain, which are perpendicular or parallel to the contours in picturesque disorder. (Figure 84, 85)



Figure 84 Site map of Benzhai, Anshun

Wenming Zhu, “Study of the Space Configuration and Conservation Approaches in Anshun Tunpu”
(Master thesis, Huazhong University of Science & Technology, 2010).

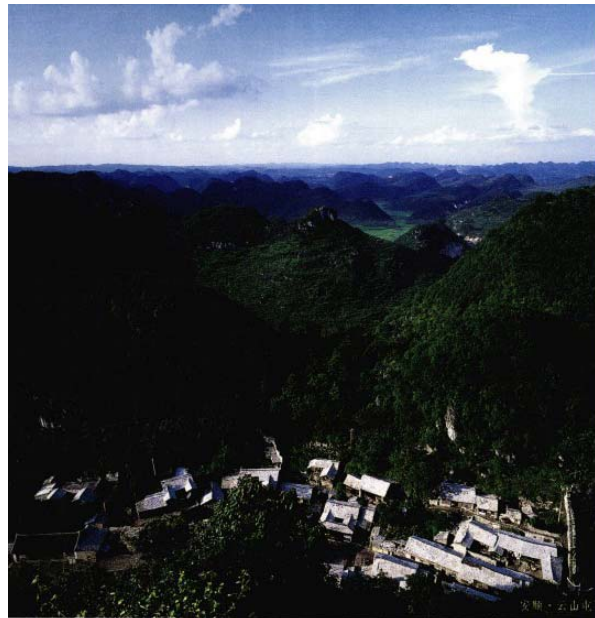


Figure 85 Anshun, Zhouguantun

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 172.

(2) Plans of houses are mostly courtyard layout, which can be symmetric or asymmetric according to the natural topography condition. The structure is column-and-tie construction or column-and tie and post-and-lintel hybrid construction. Brick, stone, wood board or mud with bamboo are usually used for building enclosure. Stone, brick or tile are used for flooring. (Figure 86, 87)

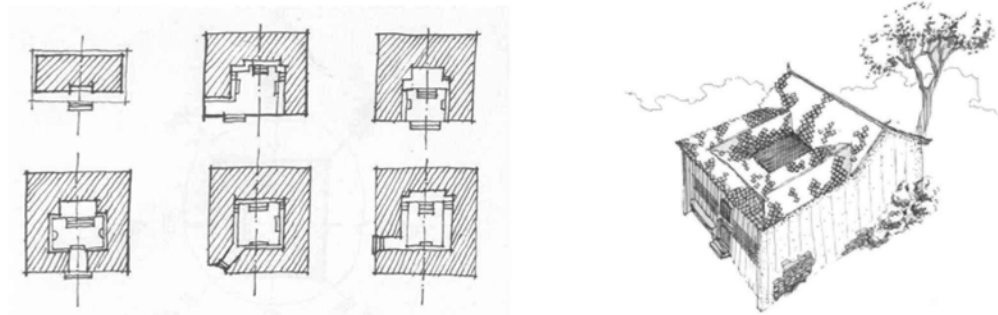


Figure 86 Typical plan of tunbao house

Shunxiang Chen, “A study of social and dimensional configuration of settlements in Guizhou Tunpu”
(Master thesis, Tianjin University, 2005).

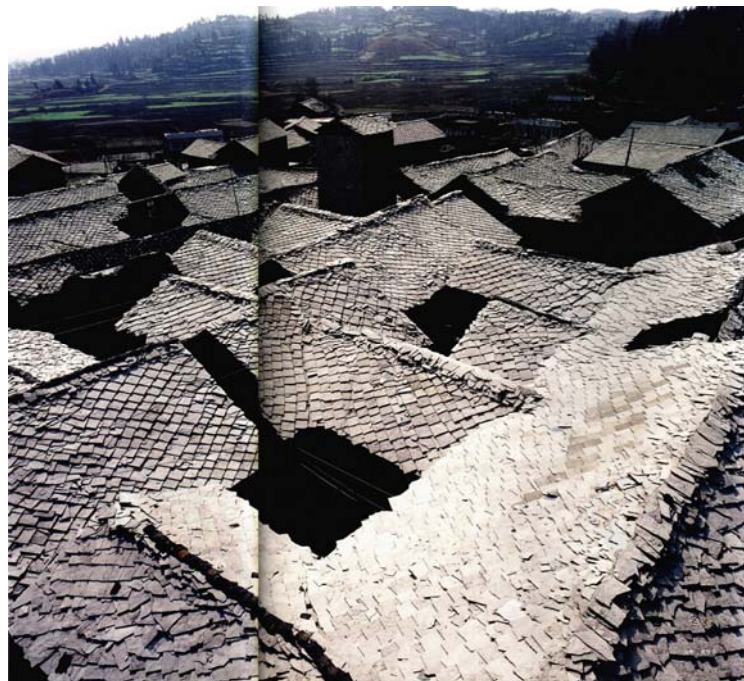


Figure 87 Anshun, Zhouguantun

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 176-177.

(3) The function and form of houses have developed from adapting to the natural environment, meeting the everyday needs to meeting the spiritual enjoyment. The building contains deep culture connotation, various details and decorations, reflecting the economic strength and social status of the occupants. More ethical and educational function has been committed.

(4) Settlements gradually developed from villages to urban settlements. The space and street system of settlements is complex. Buildings for different kinds of function have emerged. (Figure 88, 89)

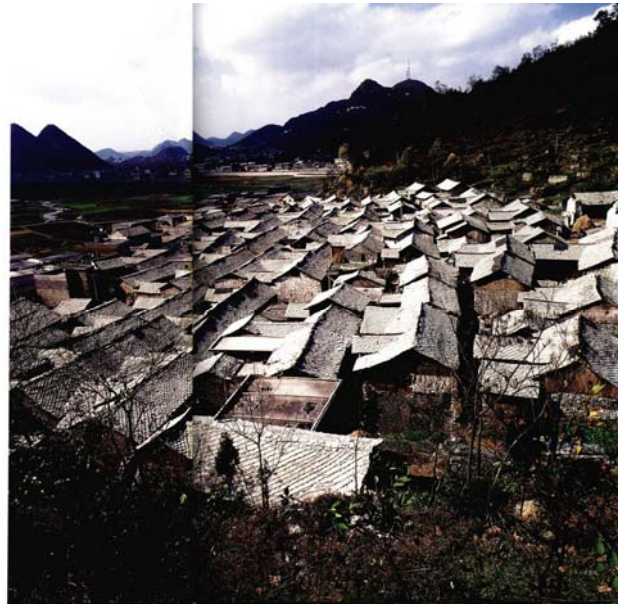


Figure 88 Anshun, Benzhai

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 174.



Figure 89 Jiuxi Village nowadays

Wenming Zhu, “Study of the Space Configuration and Conservation Approaches in Anshun Tunpu” (Master thesis, Huazhong University of Science & Technology, 2010).

6.3 Ecological Principles of Vernacular Architecture

When building houses and settlements in such a mountainous region like Guizhou, how building touch the ground is the important way to obtain the harmony between architecture and natural environment. To achieve a better effect, the ground level of buildings needs to be adjusted according to the site, including its specific slope, shape of the mountain, ground texture, etc. (Figure 90)

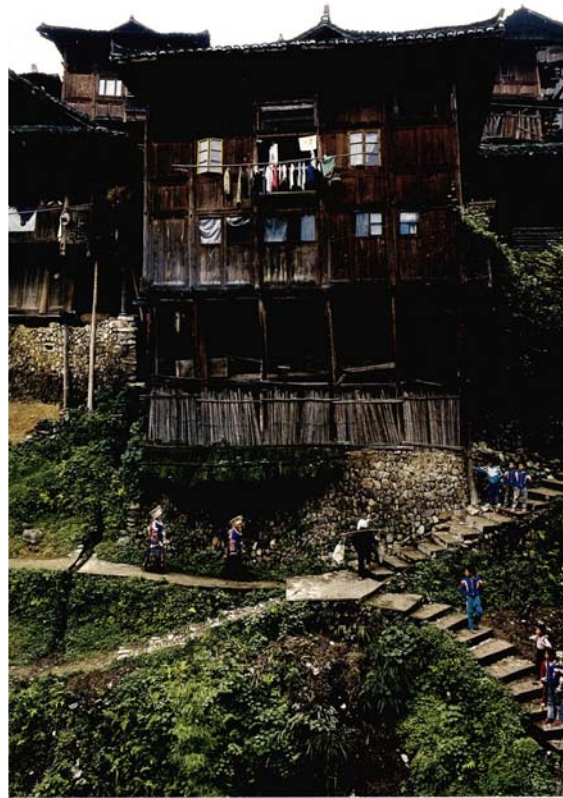


Figure 90 Hmong stilt house, Leishan, Xijiang

Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 51.

The consciousness of maintaining the natural eco-environment on the ground is important for building houses on very limited sites. Consideration must be given to both the architecture form and the form of natural mountain. The intelligent use of terrain elevation difference includes constructing buildings following the mountains, adapting to elevation difference and landscapes, keeping or making use of rocks. (Figure 91)

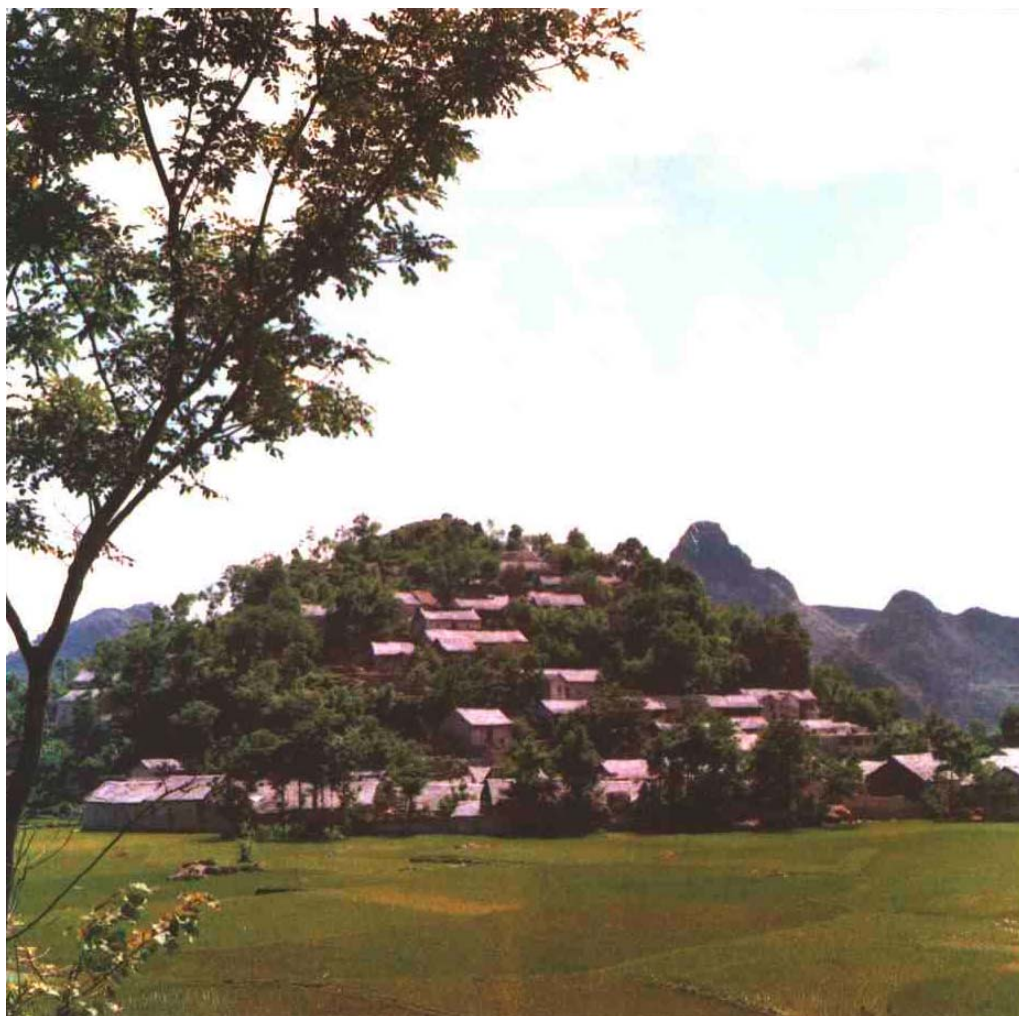


Figure 91 Stone-stockaded village of the Bouyei nationality, Zhenning County
Guizhou Cultural Relics Management Committee, edit, *Ancient Guizhou Architecture*,
(Guiyang: Guizhou Art Publishing House, 1987), 72.

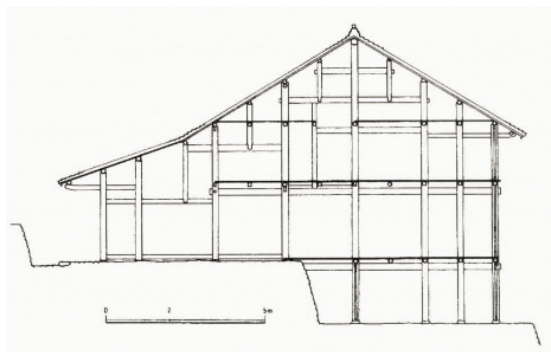


Figure 92 Typical “half house half ground” stilt house
Luo Deqi 罗德启, *Guizhou minju 贵州民居*, (Beijing: China Architecture & Building Press, 2008), 117.

The morphological feature of mountainous architecture is represented by building on stilts, overhanging and vertical combination of buildings. By keeping the consistency of architectural form and mountain slope form, the organic integration of the architecture and the natural environment have been achieved. (Figure 92)

6.4 Yamen Buildings in Guizhou

A yamen (衙门) is any local bureaucrat's, or mandarin's, office and residence of the Chinese Empire. Within the yamen, the bureaucrat administered the government business of the town or region. Typical responsibilities of the bureaucrat includes local finance, capital works, judging of civil and criminal cases, and issuing decrees and policies. Typically, the bureaucrat and his immediate family would live in a residence attached to the yamen. Although there are not many well-preserved yamen buildings in Guizhou, there are different types of it: headman's manor and bureaucrat's office of both Han Chinese and ethnic minorities. Especially the headman manors of Yi people, some are well-preserved and now national monuments.

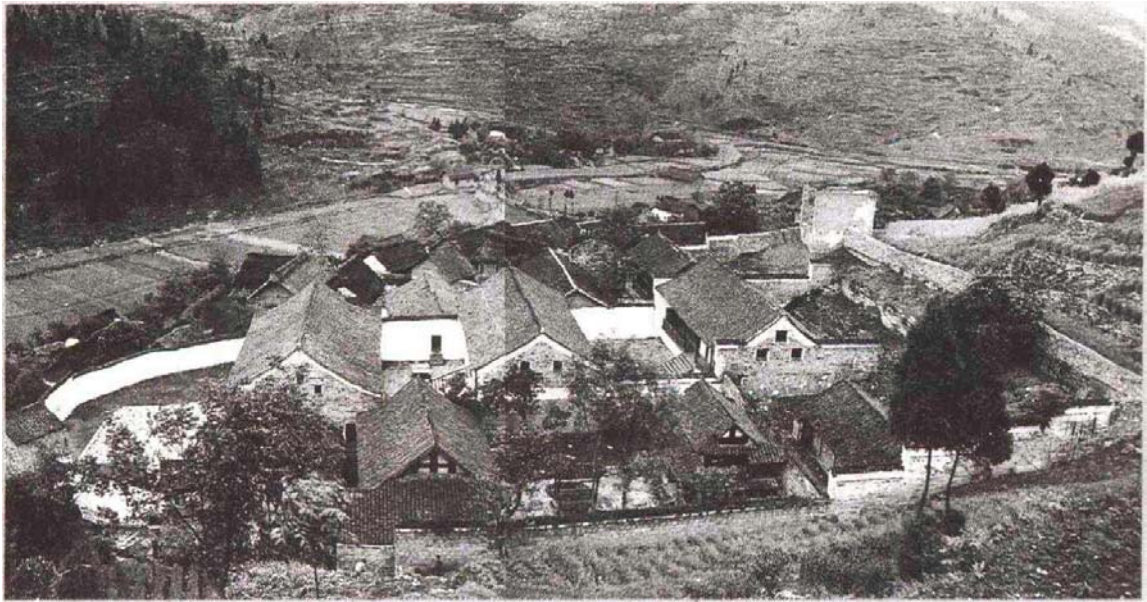


Figure 93 Datun Headman Manor

Guizhou Cultural Relics Management Committee, edit, *Ancient Guizhou Architecture*,
(Guiyang: Guizhou Art Publishing House, 1987), 55.



Figure 94 Datun Headman Manor

Guizhou Cultural Relics Management Committee, edit, *Ancient Guizhou Architecture*, (Guiyang: Guizhou Art Publishing House, 1987), 55.

For example, the Datun Headman Manor situated in Datun, Longchang, northeast of Bijie County, it was built in 1821, the first year of Daoguang reign in the Qing Dynasty, built by Yu Xiang-yi, the headman of Yi ethnic group. Around the manor, there are a higher wall and six blockhouses with 8-10 meters in height built along the wall. Inside the manor, there are three halls, garden, sedan chair house, fish pond, grain mill, parlor, warehouse, kitchen etc. linked up together by the corridors, which are arranged elegantly.⁴⁹ (Figure 93, 94)



Figure 95 Front gate, Guizhou Zhentai Yamen

Source: “醉美贵州行之红色之旅,” accessed April 10, 2014, http://auto.city.sina.com.cn/gy/auto/2012-09-27/20-294_6.html.

⁴⁹ Guizhou Cultural Relics Management Committee, edit, *Ancient Guizhou Architecture*, (Guiyang: Guizhou Art Publishing House, 1987), 55.



Figure 96 Full-view and on the exterior wall, Guzhou Zhentai Yamen

Source: “红七军军部旧址-榕江县政府,” accessed April 10, 2014,
<http://www.rongjiang.gov.cn/info/2094/33580.htm>.



Figure 97 Space between the exterior walls and major buildings, Guzhou Zhentai Yamen

Source: “榕江县城与古州衙门,” accessed April 10, 2014,
http://blog.sina.com.cn/s/blog_4d5dfc6c0100g4vv.html.

The Guzhou Zhentai Yamen was built in 1736, the first year of Qianlong reign. The secondary hall was rebuilt in 1900 Guangxu reign. In the building complex, there are two halls and two adjacent accommodations on both sides with a courtyard in the middle. Two halls are connected by the corridors, and there is garden around the major buildings. (Figure 95, 96, 97)

Regardless of size and grade, yamen buildings show the following characteristics:

(1) Multi-level courtyards: this type of high-grade courtyards have practical, political,

monumental and ornamental applications. The features include rigorous layout, spacious spatial volume, regular courtyards and clear boundaries between different levels.

(2) Facing south, axial symmetrical. Major building are all located on the north-south axis. From south to north, there are screen wall (照壁), main gate (大门), ceremonial gate (仪门), stone arch (戒石坊), liufang (六房), great hall (大堂), secondary hall (二堂), third hall (三堂). Accessory buildings and adjacent accommodation are located east-west axes.

(3) Clear functional areas: halls and offices are in the front, and residences are in the rear. As yamens were not only the work place for the bureaucrat but also the residences for the bureaucrat and his family, clear functional areas are very important. The great hall and the secondary hall served as a court of law. Residences and courtyards are located behind the secondary hall for the bureaucrat, his family and his staff.

(4) Orientation and layout were decided according to fengshui theory. South west was considered as dirty place, so prison cells were usually located southwest of the ceremonial gate; Two side entrances were located on both sides of the ceremonial gate: the east one is for staff and the west one is for condemned.

6.5 Summary

The way of thinking of vernacular architecture and yamen buildings in Guizhou can be learned by us: especially its idea of making an issue of “uneven”, its respect for the environment and its consciousness of protecting the ecosystem. The approaches and techniques dealing with different topographical conditions can be used for reference when designing mountain architecture or mountain towns nowadays. From the perspective of cultural diversity, the vernacular architecture in Guizhou is an important part of the cultural context. Its principles are very valuable to the creation of cultural identities within architecture in today’s China.

Chapter 7 | Design of Fenggang Administrative Center

How to solve the current issues of administrative buildings in China and improve the design of administrative buildings? Based on the precedents studies, the study of yamen buildings and vernacular architecture in Guizhou, this chapter will use author's design of the Fenggang Administrative Center in Fenggang County, Guizhou Province, China, to illustrate a new set of design strategies.

7.1 The Project

Located east of Zunyi city, Fenggang, the county was known for its tea industry, proposed an development plan of new town construction. In the proposed new town with an area of 5.28 square kilometers, the municipal government decided to build an administrative center as the startup project. In July 2012, Tongji Architectural Design Institute was designated to design the regulator detailed plan and the administrative center project. The author was one of team members of this project.

The project site sits in the center of the new town area, on a parcel among mountains to its four sides (Figure 98). The government called for a programming of offices for the government and other party institutions, council-chambers, public services, dining and supporting facilities. Above functions are required but the floor area is not specified. More than ten schemes has been designed by Tongji Architectural Design Institute (Figure 99), and one was chosen by the municipal government as the final scheme (Figure 100). However, as the central government issued a directive banning the construction of government buildings for the next five years in July 2013, the project has been suspended.

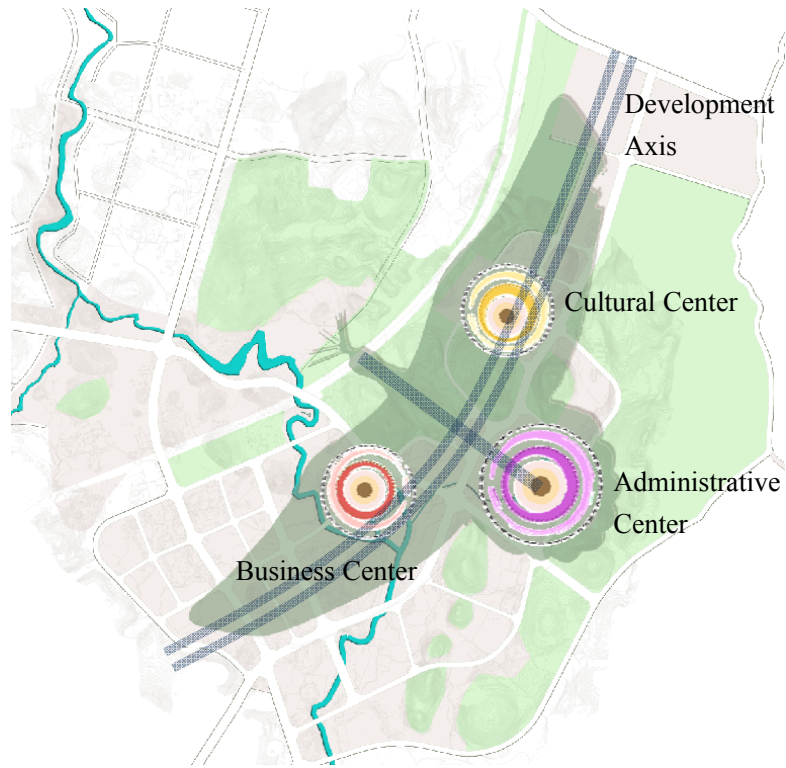


Figure 98 Functional structure diagram

Source: Tongji Architectural Design Institute, *Regulatory Detailed Plan for the New Town of Fenggang*, August 2012. Edited by Tao Yang



Figure 99 Four of the early schemes designed by Tongji Architectural Design Institute

Source: Tongji Architectural Design Institute, *The design presentation of Fenggang Administrative Center*, November 2012.



Figure 100 Final scheme chosen by the municipal government

Source: Tongji Architectural Design Institute, *The design presentation of Fenggang Administrative Center*, November 2012.

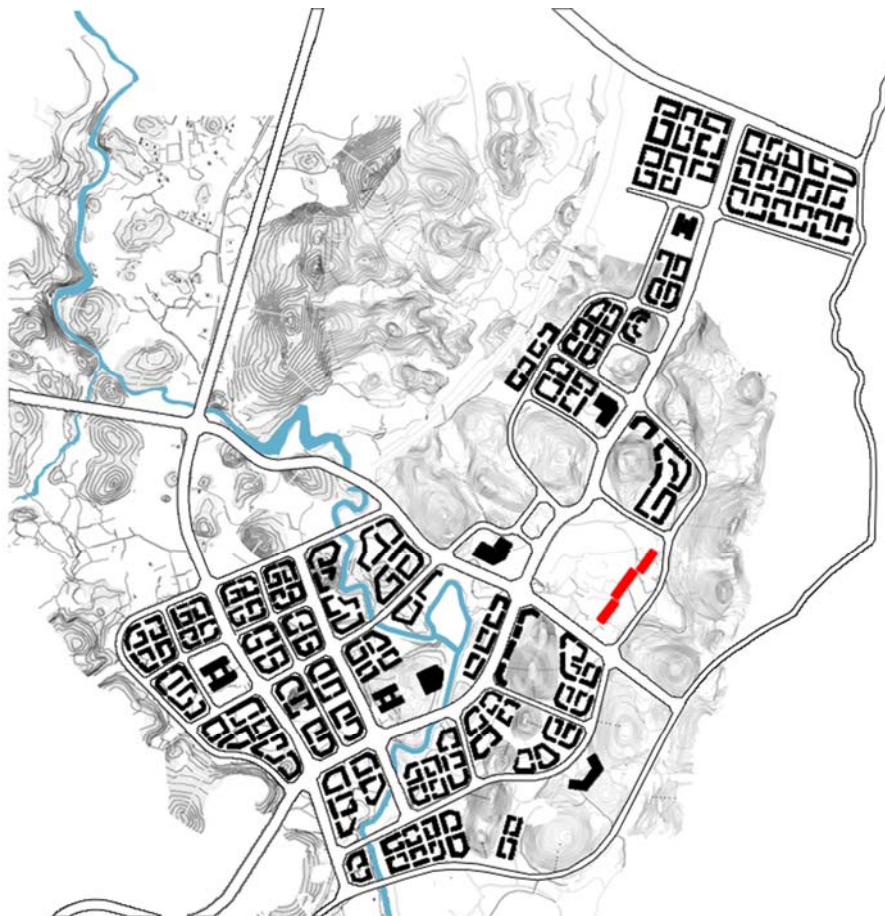


Figure 101 Figure-ground diagram based on the regulator detailed plan and early schemes by Tao Yang

Early schemes reflected the conventional design approach, they all showed a long row of high-rise building or a tower with a long podium, and with the huge square in front of the building to its west as “public space”. Although the façade design in different schemes were different, some were intended to respond to the traditional architecture or the topography, but the overall layout and the image of buildings are similar (Figure 101).

7.2 Design Strategies

7.2.1 Strategy of Programming

As the total floor area was not specified, and in order to avoid over-sized administrative buildings like in other cities in China, it is necessary to find an ample basis to determine the scale of the project. According to the standard issued the State Planning Commission of the people's Republic of China (“for office buildings of authorities at the county level, the per capita building floor area is 16~18m², ... when personnel quota is over 100, should use the lower limit.”⁵⁰), the per capita building floor area for office buildings of authorities at the county level is 16 square meters. By calculating with the number of civil servants in China (7,089,000 — number of civil servants in China by the end of 2012⁵¹), the population of China (1,354,040,000 — population of China by the end of 2012⁵²) and the population of Fenggang County (421,800 — population of Fenggang County by the end of 2012⁵³), the estimated number of civil servants of Fenggang County is 2,200 ($7,089,000 / 1,354,040,000 * 421,800$). According the numbers listed above, the maximum floor area of the project is set at 35,200 square meters ($2,200 * 16$ square meters) in the design.

⁵⁰ State Planning Commission of the people's Republic of China 中华人民共和国国家计划委员会, *Construction Standards for Office Buildings of Party and Government Institutions* 党政机关办公用房建设标准 (Beijing 北京, 1999), 2.

⁵¹ “2012 年底全国公务员总数为 708.9 万人”, last modified June 27, 2013,

<http://www.scs.gov.cn/Desktop.aspx?path=gjgwyj/gjgwyjsy/xxllym&gid=75c39c77-a077-427a-ad2f-55cb03192c21>.

⁵² “年度数据”, accessed February 17, 2014, <http://data.stats.gov.cn/workspace/index?m=hgnd>.

⁵³ “凤冈县 2012 年国民经济和社会发展统计公报”, last modified April 9, 2013,

<http://www.gzfenggang.gov.cn/xxgk/tjsj/tjgb/12131.shtml>.

According to the maximum floor area and the requirements of the Fenggang government⁵⁴, the basic functions of the project and approximate floor area of some functions are listed below: (1) County Party Committee (about 2,000 square meter): three offices for party secretaries (including secretary room, lounge, restroom), one 40-seat reception hall for the “big four”, one 60-seat conference room, one 15-seat secretary meeting room, one 60-seat executive meeting room, other offices; (2) Discipline Inspection Commission, Organization Department, Publicity Department (about 2,000 square meter): three minister offices (excluding secretary room), one 60-seat meeting rooms, one 40-seat meeting rooms, one 20-seat meeting rooms; (3) County Government (about 4,000 square meter): nine county magistrate offices (including secretary room), one 20-seat county magistrate meeting room, one 40-seat executive meeting room, two 20-seat meeting rooms, one 60-seat meeting room, other offices; (4) County People’s Congress (about 2,000 square meter): one chairman office (excluding secretary room), seven vice-chairman offices (excluding secretary room), one 60-seat meeting room, one 20-seat meeting room, other offices; (5) County People’s Political Consultative Conference (about 2000 square meter): the same as County People’s Congress; (6) Party institutions (about 15,000 square meter): offices, nine 20-seats meeting rooms, 40-seats meeting rooms; (7) Council-chambers: one 700-seat council-chamber, one 350-seat council-chamber, one 170-seat council-chamber, one 120-seat council-chamber; (8) Group discussion meeting rooms; (9) Public service spaces (Civil Affairs Bureau, Bureau of Commerce); (10) Dinning: one 400-seat cafeteria, one 40-seat cafeteria, one banquet hall, one 30-seat dinning rooms, four 15-seat dinning room.

In addition to the basic functions, the design introduces a library into the project. In the design of Western administrative buildings, library is a common accompanying function, for example the Säynätsalo Town Hall by Alvar Aalto, the Hague City Hall by Richard Meier and the Marin County Civic Center by Frank Lloyd Wright. By introducing a library into the programming, the design attempts to provide settings for more public presence, educative and

⁵⁴ Fenggang government, e-mail message to Tongji Design Institute, “proposal for offices layout of the new administrative center building in Fenggang County”, January 17, 2013.

103, 104, 105), two “street” spaces has been created in the design. One is designed only for pedestrian flows, and the other is designed for cars (Figure 106). The dimension of the street, which is further expanded than traditional streets, provides possibilities for open-ended activities more than a traffic corridor. Nodes like plazas and courtyards create more static setting that supports social gathering, supplementing the street as public spaces (Figure 107).

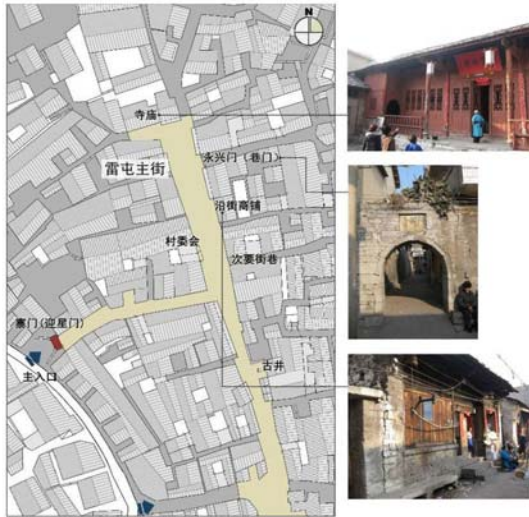


Figure 103 Street used for public activities, Leitun
Wenming Zhu, “Study of the Space Configuration and Conservation Approaches in Anshun Tunpu”
(Master thesis, Huazhong University of Science & Technology, 2010), 30-31.



Figure 104 Street used for traffic, Benzhai
Wenming Zhu, “Study of the Space Configuration and Conservation Approaches in Anshun Tunpu”
(Master thesis, Huazhong University of Science & Technology, 2010), 30-31.



Figure 105 Early sketch and first floor plan showing the concept of “street space”
by Tao Yang



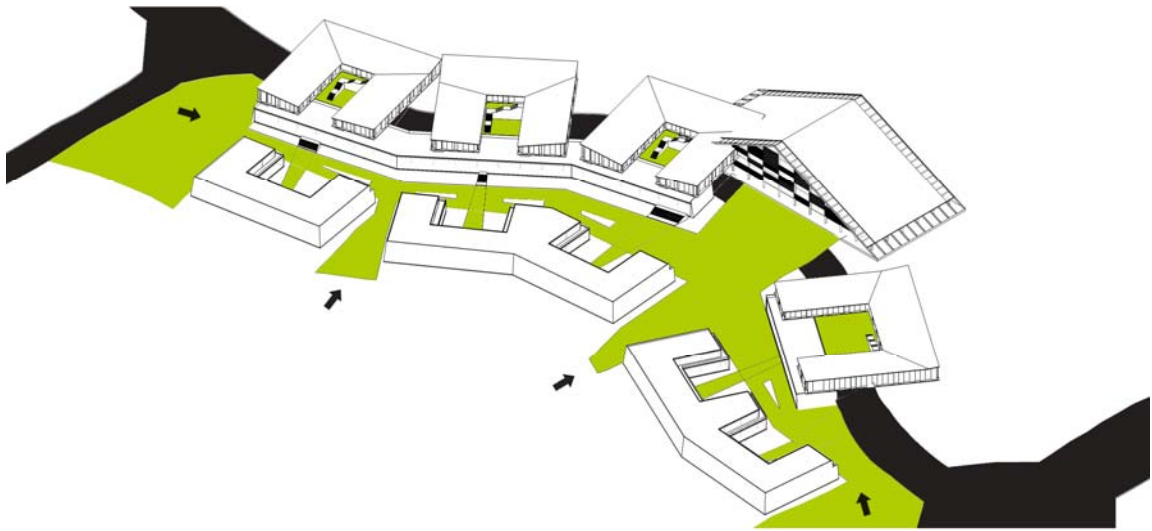


Figure 106 Diagram of two types of “street” spaces with plazas and courtyards
(green for pedestrians, black for cars)
by Tao Yang



Figure 107 Rendering showing the open-ended uses of public spaces
by Tao Yang

(2) Coexisting with the site: From the very beginning of the design, the site condition has been the most important factor taken into consideration, especially the existing topography. Taking the inspiration from the mountainous architecture and settlements of ethnic minorities in Guizhou, the orientation and the ground level of different portions has been adjusted according to

the topography (Figure 108, 109), also the two “street” spaces and courtyards have been located at different levels. The design of building applies the morphological feature of vertical combination of buildings from stilt houses (Figure 110), trying to “touch the ground” in a different way with the early schemes and to “talk to the site” (Figure 111, 112).

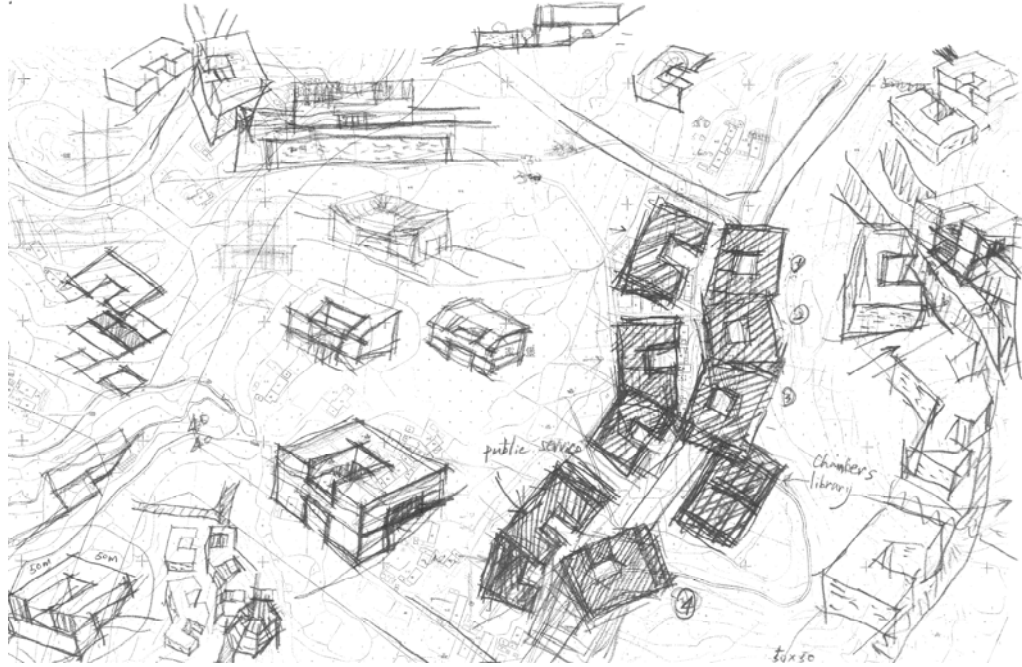


Figure 108 Early sketches showing the concept of coexisting with the site
by Tao Yang



Figure 109 Study model of the site and building massing
by Tao Yang

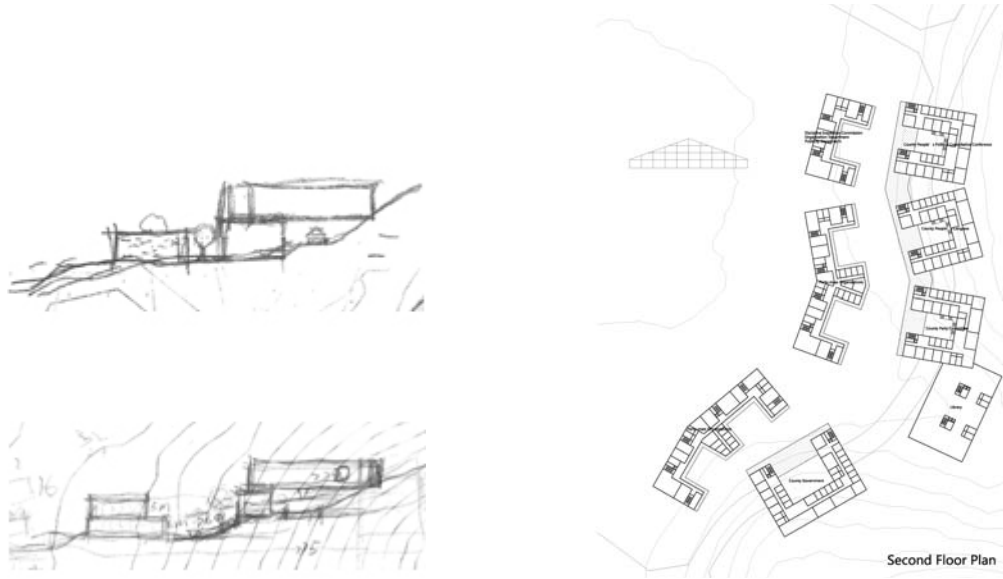


Figure 110 Early section sketches and second floor plan showing the vertical combination by Tao Yang

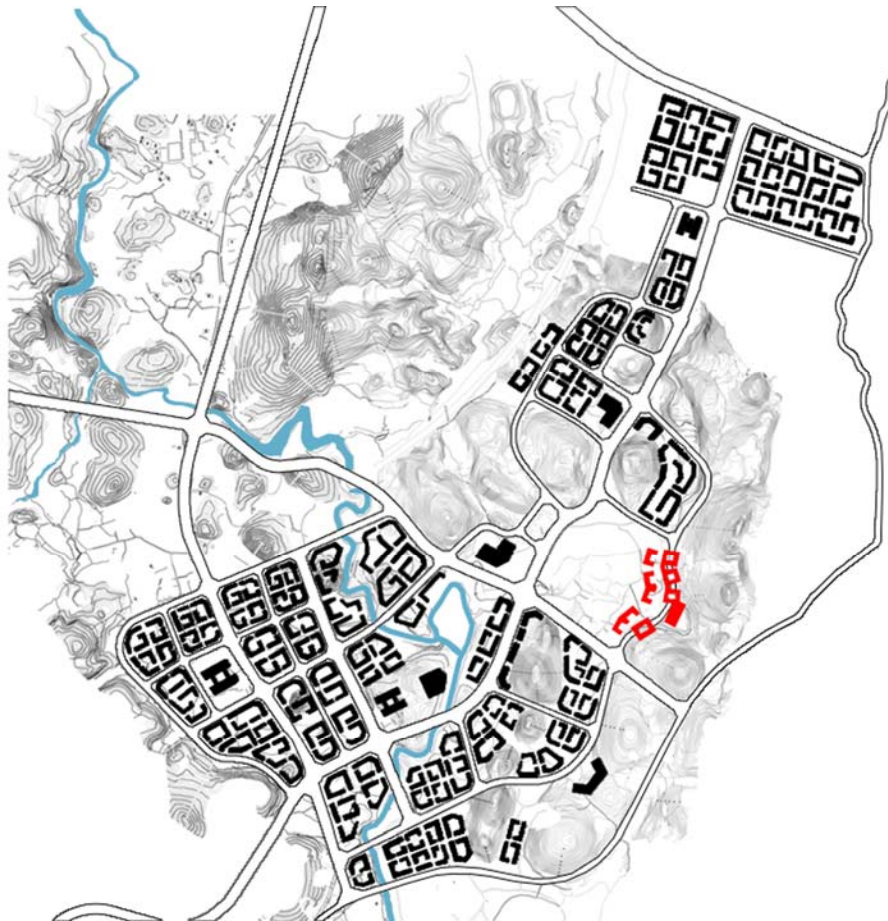


Figure 111 Figure-ground diagram based on the proposed scheme by Tao Yang

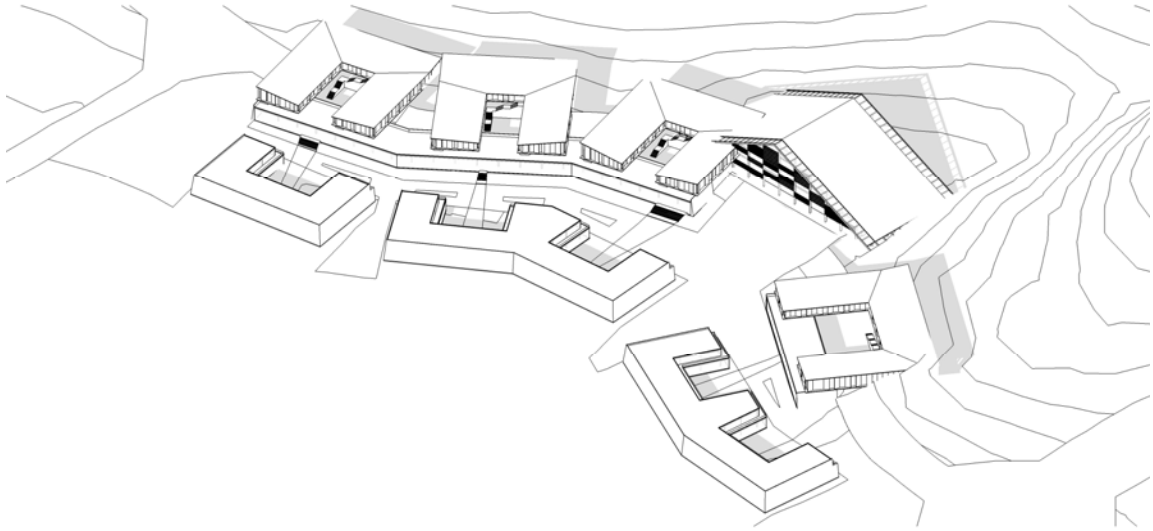


Figure 112 Axonometric drawing of buildings and the site
by Tao Yang

(3) Vertical zoning: as the public presence and the requirement of security are different based on functions, the building functions in the design are juxtaposed vertically. The public services, exhibition spaces and council-chambers, along with the outdoor “street” space, plazas and courtyards, are in the first floor, allowing the accessibility for the public (Figure 113). The offices of institutions are moved to the upper level, making the government and party institutions more secured, and also providing a good view of courtyard spaces. (Figure 114)

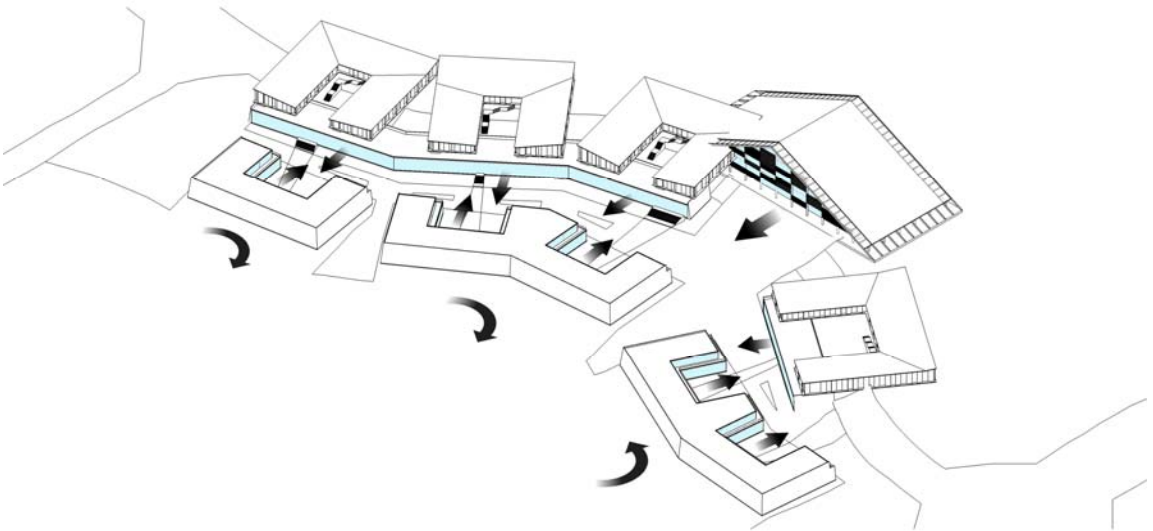


Figure 113 Diagram showing the concept of “open to the street space on the ground”
by Tao Yang

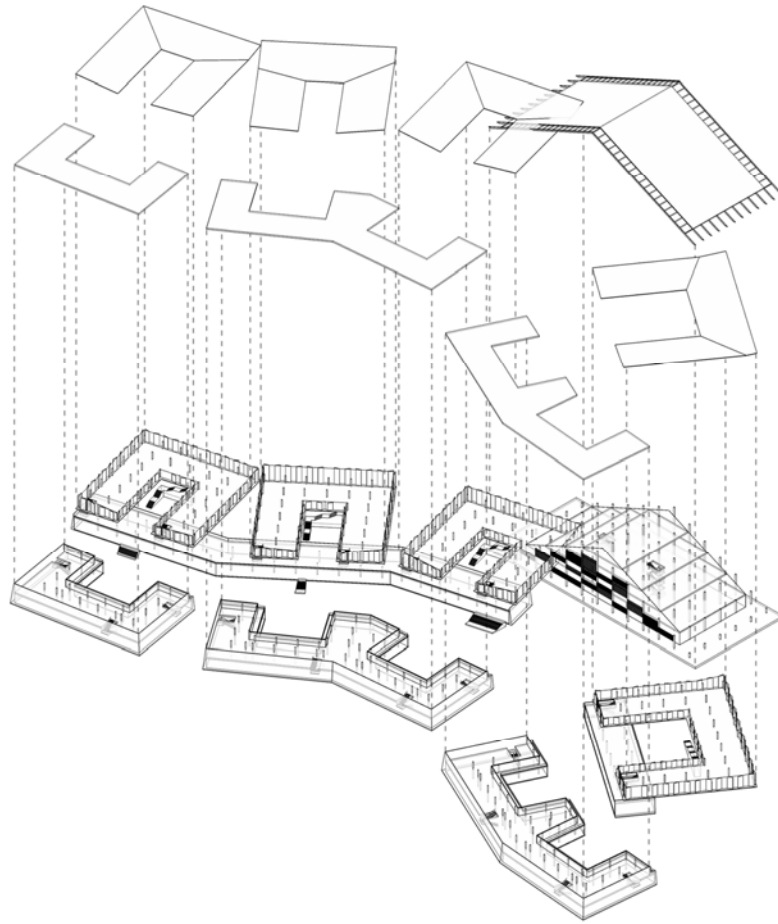


Figure 114 Exploded axonometric diagram
by Tao Yang

7.2.3 Strategy of Creating Identity

(1) Courtyard typology: “One of the characteristics of Chinese traditional space is coupling an indoor space with some outdoors spaces to serve each building function.”⁵⁵ Taking the inspiration from vernacular architecture of Han Chinese in Guizhou, especially the tunbao houses (Figure 86), the design tries to adapt the courtyard layout to the project. Each building are paired with open spaces. Some are only accessible to the government workers, providing views and buffer spaces. Others are more open spaces which can be shared by the public. (Figure 115)

⁵⁵ Pu Miao, “Public Space, High Density, and an Emerging Civil Society,” *Urban Design* (UK, Summer/2013).



Figure 115 Part of first floor plan showing different types of courtyard space by Tao Yang

(2) Translation of traditional gable and pitched roof: the gable and the pitched roof of vernacular buildings in Guizhou is a significant feature (Figure 116), the design tries to make creative uses of it to support a visually distinctive 3-D form in the exterior. The shape and the façade of the center building, which houses council chambers, the cafeteria and the county library, is a translation of the gable of vernacular buildings (Figure 117). The external blinds may also reminds people of the texture of a traditional façade. The roofs of different portions are designed in different shapes and vary in height, creating a image similar to a traditional settlement.



Figure 116 The gable of a traditional house in Guizhou
Source: “重庆与贵州交界处贵州民居,” accessed May 6, 2014,
<http://www.panoramio.com/photo/20645359>.

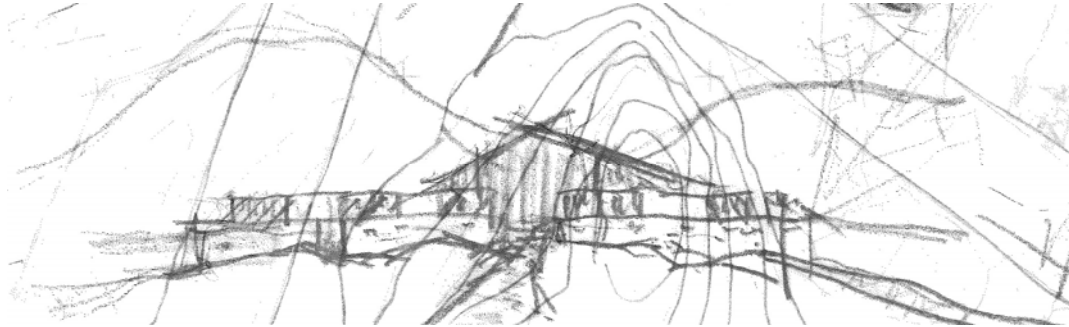


Figure 117 Early sketch showing the façade design concept
by Tao Yang

(3) Using local material: there are two kinds of building material wildly used in different areas of Guizhou — wood and stone. Stone is normally used for the base (in some cases stone is used for walls and roofing), and wood is used for structure frames and wall panels (Figure 118, 119). The design tried several ways to adapt the local materials (Figure 120). Stone walls are used in the periphery of the whole complex, and slate is used as the paving material for most public spaces and the roofing material of the center buildings. Wood is used for sunbreakers and blinds. The stone walls facing the southwest are also good for the insulation of buildings (Figure 121).



Figure 118 Vernacular buildings with stone base, Huaxi, Zhenshan
Li Ming, Dong Ming, Tan Xiaodong and Xiao Chi, edit, *The Folkloric Heritage of Guizhou Vernacular Architecture* (Guiyang Shi: Guizhou ren min chu ban she), 124-125.



Figure 119 Study of different types of stone walls
 Edited by Tao Yang



Figure 120 Axonometric drawing showing the use of materials
 Edited by Tao Yang

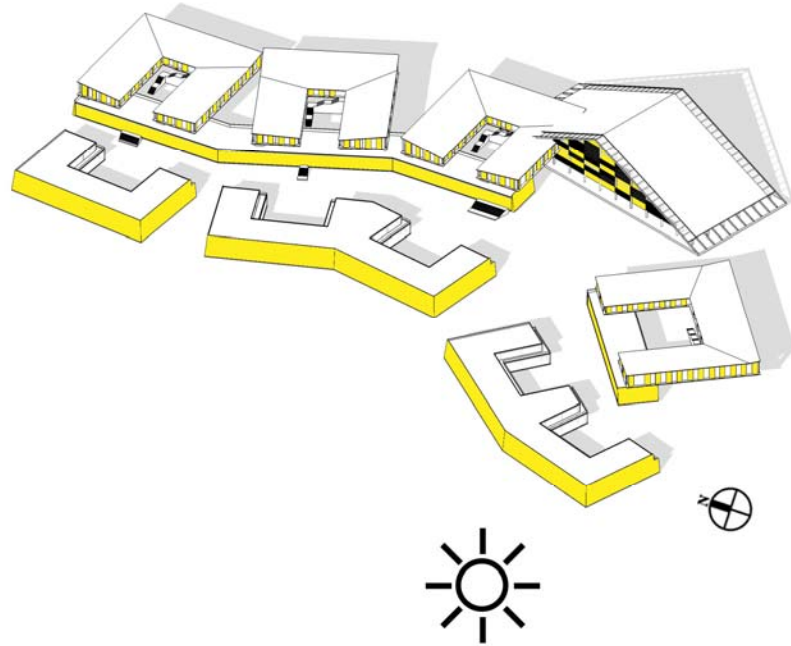


Figure 121 Axonometric drawing showing the use of materials
Edited by Tao Yang



Figure 122 Rendering showing the translation of vernacular architecture and use of materials
by Tao Yang

7.3 Summary

Compared with the early schemes, the design of Fenggang Administrative Center aims at improving the conventional design of administrative buildings in China by setting an

appropriate scale based on studies, making spaces with more public presence and creating culture identity in the building. By learning from the vernacular architecture, new approaches have been used in the design to create a civil place in harmony with the public, the nature and the culture (Figure 122).

Chapter 8 | Conclusions

8.1 Introduction

In this chapter, the main findings with regard to the research questions are summarized and general conclusion based on the findings of the studies presented in this thesis are described. Furthermore, the strengths and limitations of the research and the design are considered and suggestions for further research of administrative buildings are presented. This chapter concludes with the vision for three design strategies for administrative buildings in China: more appropriate scale, more public presence, and more cultural identity.

8.2 Research Findings

Through the research on three aspects: the historical evolution (Chapter 2), the contemporary trends (Chapter 3) and the design patterns of Western administrative buildings (Chapter 4), the following results have been obtained:

8.2.1 Relationship between Ideology and Administrative Buildings

From the ancient times to now, the historical evolution of Western administrative building can be roughly divided into three main stages: original stage (from Ancient Greece to Ancient Rome), developing stage (from the Middle Ages, Renaissance to Absolute monarchy), Mature Stage (after the Bourgeois Revolution).

Affected by powers and duties of the government in different periods, Western administrative buildings of different periods have different types and characteristics. Overall, the

development of Western administrative building was closely related to square. Under the influence of political power, it alternately showed open, public characteristics of citizens and closed private characteristics of dictatorship.

8.2.2 Five Trends Showed in Contemporary Western Administrative Buildings

Based on its political foundations—country's political system based on separation of powers and municipal system dominated by council, and its theoretical background—the revival of civil society and the impact of government reform movement, contemporary Western administrative building shows the following five trends:

First, publicity and openness of space. Contemporary Western administrative building tries to seek a positive interaction between country, citizens and society which are opposed to each other, and it makes the space gradually return to the public and open nature. There are several main design approach: strengthening the equal accessibility, eliminating rank of height, scale and orientation of the space, eliminating rank of color and texture, focusing on the sight line design with communication and interaction, breaking the rigid functional circulations, etc.

Second, multi-function. Contemporary Western administrative building pays more attention to its essential attribute as urban public space. While emphasizing publicity and openness of the space, it also shows a tendency to diversification in function. In addition to administration and administrative services, administrative building may also provide a wide range of public service facilities and public spaces, or consist multi-functional public building complex together with other civic buildings.

Third, symbiosis of old and new. Some Western historical administrative buildings has high architectural quality and artistic value and is also a record of the city's history, so there is high value for conservation and re-use. Addition or conversion on the original building has

become one of the design strategies of contemporary Western administrative buildings, which reflects regional consciousness, national history and culture.

Fourth, adoption of eco-technology. In the current context of ecology and sustainable development, the government's concern for environment has become one of the symbolism of contemporary Western administrative buildings: through the adoption of eco-technologies in the design, administrative building itself is used to convey environmental awareness and perceptions to the public.

Fifth, depoliticization. Traditional administrative buildings generally had strong political implications, and there usually was a fixed architectural image in a certain period of time. With the Western democratic political process, the image of government is increasingly open, and it hopes to convey the concept of democracy to the public at least in the image of administrative building. Contemporary Western administrative building reflects the trend towards depoliticization in its architectural image by using different design strategies, for example irregular shapes, transparent materials, national symbols, etc. It is rich in style and form, and it reflects multiple values of contemporary Western society.

8.2.3 Design Patterns of Administrative Buildings at Three Levels

By the analysis of the design patterns of Western administrative building, this study attempts to construct an open frame of the design patterns of administrative building, not only based on history but also for the future. Based on typology, the design patterns of Western administrative building are summarized at three levels:

Macro-level—three types of building location of administrative building in the city; meso level—four forms of square space; micro level—the architectural design influenced by three main factors. The design patterns at macro-level are summarized as three: geographic prominent location, city center, public building complex on the edge of the city or in the new

city. At meso level, the design patterns are: multi-functional enclosed square, ceremonial square, interior square and pass-through administrative building. At micro level, three main design factors of Western administrative building are analyzed and summarized: symbolism, parliamentary system and regional culture, and several corresponding design patterns are generalized. In addition, some representative examples of administrative buildings are analyzed by using the conclusion of the research in the appendix.

It should be noted that administrative building is a particular type of building with certain regularity, however it also includes specific details. From the macro level to the micro level, various elements in the overall context always interact and complement with each other, and there is some overlap of these concepts at different levels. By understanding the basic guidelines and the common parts, the design patterns summarized in this thesis are the basic ones at different levels. The purpose is to construct an open frame for the design and research of administrative building. It may not cover everything. However, the programming, the facade design, etc. are studied in detail in the design project.

8.3 Implications for Future Administrative Building Design in China

The process and the outcome of the design research for Fenggang Administrative Center show a possible way, different with the conventional design approach, to design an administrative buildings in today's China. Aiming to solve the current issues of administrative buildings in China — scale, public presence, and identity, the design takes inspirations from vernacular architecture and Chinese traditional spaces, and uses public spaces as the main foundation of the design concepts. The authority and the power of the government is no longer the dominant factor shaping the image of the building.

By understanding the basic concepts and the common design approach, the design of administrative buildings in China can be improved at different levels: the relationship to urban

spaces, the relationship to the public, and the image of the building. Some design patterns of Western administrative buildings can also be use as the reference for China. The purpose of this project is to construct an open frame for the research and the design of administrative building. It may not cover every aspects of it. The idea of creating identity requires particular research for the context of different projects—regional, historical, political, social, ideological, and cultural issues. More detailed issues can be supplemented in the design of specific projects.

As China has entered a historical moment that a fundamental reform in the political and social structure are inevitable. The administrative buildings in Chinese cities may contribute to the process of making the civil society to some extent. Even though architecture design may not change the society directly, no one can deny that architectural form does have impact on shaping public spaces, human behaviors, and creating cultural identity. Administrative buildings built in a more appropriate scale, with more public presence and more cultural identities are needed for the emerging civil society.

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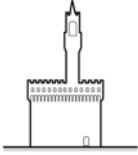
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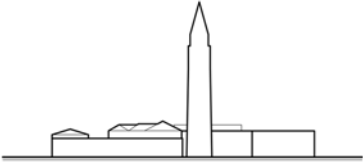
Appendix | Analytic Diagrams of Administrative Buildings


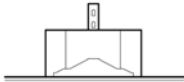
(all drawings are at the same scale)


NAME / TIME	FIGURE-GROUND
<p>Pnyx in Athens, Greece (Ancient Greece)</p>	
	<p>MASSING</p> 
	<p>DESIGN PATTERNS</p>
	<p>Macro-level: at the geographic prominent location Meso-level: ceremonial square (meeting place of the Ecclesia) Micro-level: semicircular masonry structure, amphitheater form, symmetrical massing; stepping stone platform for speakers</p>


NAME / TIME	FIGURE-GROUND
<p>Palazzo Vecchio in Florence, Italy (Town Hall of Florence) (Middle Ages)</p>	

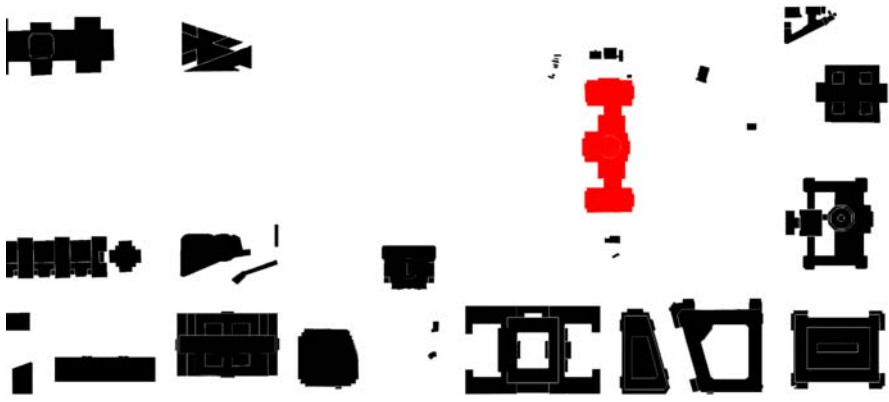

	MASSING
	
	DESIGN PATTERNS
	<p>Macro-level: in the city center</p> <p>Meso-level: multifunctional enclosed square</p> <p>Micro-level: serrated fortress, asymmetric massing,, in conjunction with loggia, administrative functions and cultural functions combined</p>



NAME / TIME	FIGURE-GROUND
Procuratie in Venice, Italy (Middle Ages)	
	MASSING
	
	DESIGN PATTERNS
	<p>Macro-level: in the city center</p> <p>Meso-level: multifunctional enclosed square</p> <p>Micro-level: continuous architectural image, but asymmetric; city hall, church, library and cafe as a whole</p>


NAME / TIME	FIGURE-GROUND
Palazzo Senatorio in Rome, Italy (Renaissance)	
	MASSING
	
	DESIGN PATTERNS <p>Macro-level: at the geographic prominent location</p> <p>Meso-level: ceremonial square</p> <p>Micro-level: architectural image strengthened by double stairway and bell tower, massing is symmetrical along axis of square</p>

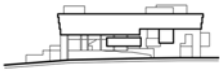
NAME / TIME	FIGURE-GROUND
Palace of Versailles in Paris, France (Absolute Monarchy Period)	

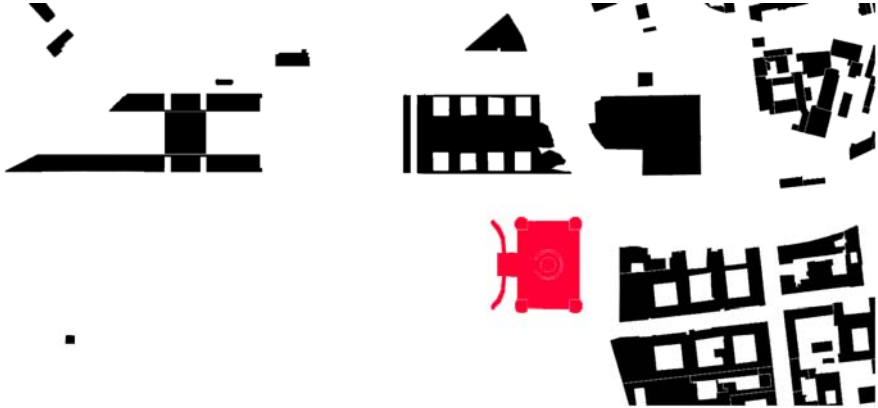

	MASSING
	
	DESIGN PATTERNS
	Macro-level: building complex in the urban fringe Meso-level: ceremonial square Micro-level: classical three-section facades; symmetrical massing

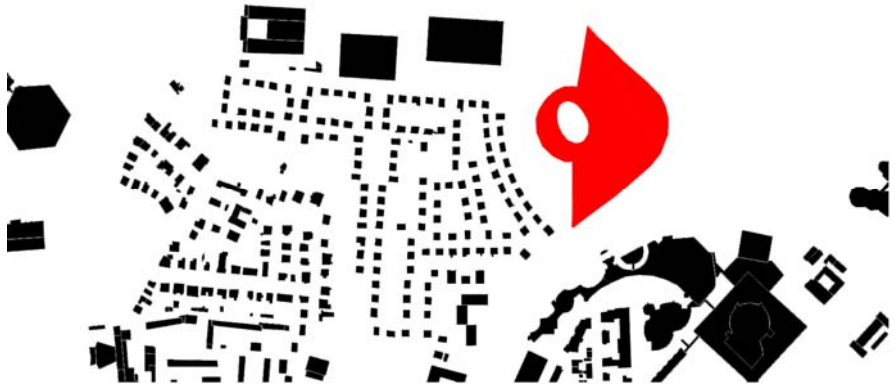

NAME / TIME	FIGURE-GROUND
United States Capitol in Washington, D.C., USA (early stages of capitalism)	
	MASSING
	
	DESIGN PATTERNS
	Macro-level: public building complex in the new city Meso-level: ceremonial square Micro-level: neoclassical style; rotunda connecting the House and Senate wings; symmetrical massing

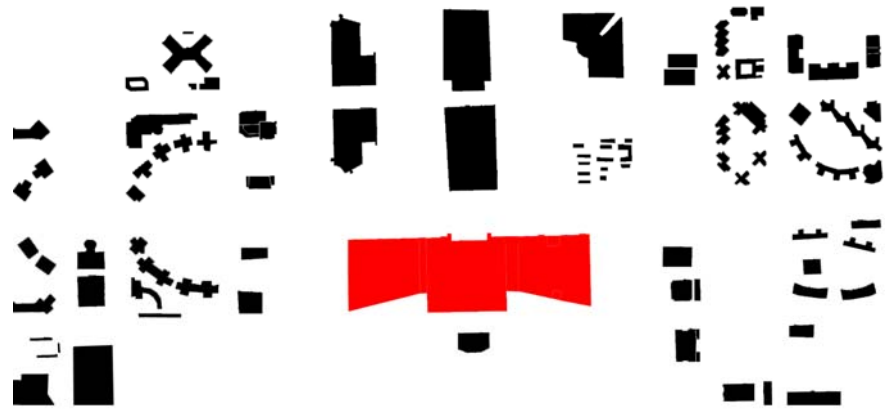
NAME / TIME	FIGURE-GROUND
<p>Hawaii State Capitol in Honolulu, USA (modern times: completed in 1969)</p>	
	MASSING
	
	<p>DESIGN PATTERNS</p> <p>Macro-level: public building complex in the city center</p> <p>Meso-level: pass-through administrative building</p> <p>Micro-level: symmetrical massing; architectural features symbolize nature (cone-shaped chambers--volcanoes; eight columns--eight main islands; reflecting pool--the Pacific Ocean)</p>

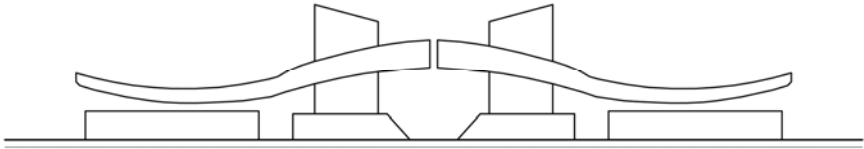
NAME / TIME	FIGURE-GROUND
<p>Boston City Hall in Boston, USA (modern times: completed in 1968)</p>	

	MASSING
	
	DESIGN PATTERNS
	<p>Macro-level: in the city center</p> <p>Meso-level: pass-through administrative building + ceremonial square</p> <p>Micro-level: brutalist style, asymmetric massing; divided into three sections: lowest open plaza; intermediate portion--public officials, a cantilevered small city; upper stories--office space, typical modern office building style</p>

NAME / TIME	FIGURE-GROUND
<p>Reichstag Building in Berlin, Germany (completed in 1894, renovated in 1961-64 and 1992)</p>	
	MASSING
	
	DESIGN PATTERNS
	<p>Macro-level: in the city center</p> <p>Meso-level: ceremonial square + interior square (the dome)</p> <p>Micro-level: neo-baroque style; symmetrical massing; main hall in the center, glass dome built on top, reflecting transparency; using eco-technology</p>

NAME / TIME	FIGURE-GROUND
<p>European Parliament in Strasbourg, France</p> <p>(contemporary: completed in 1999)</p>	
	<p>MASSING</p> 
	<p>DESIGN PATTERNS</p> <p>Macro-level: at the geographic prominent location</p> <p>Meso-level: interior square (interior agora and atrium)</p> <p>Micro-level: symmetrical massing, curvilinear forms creating monumentality without oppression; glass facade referencing transparency in government; interior agora embodying democratic spirit</p>

NAME / TIME	FIGURE-GROUND
<p>Shenzhen Civic Center in Shenzhen , China</p> <p>(contemporary: completed in 2004)</p>	

	MASSING
	
	DESIGN PATTERNS <p>Macro-level: public building complex in the new urban area</p> <p>Meso-level: ceremonial square + pass-through administrative building</p> <p>Micro-level: symmetrical massing; colors of building come from national flag, forms symbolize “spreading wings and flying up”; multifunctional civic building</p>